

NPDES Report for the Period January 1 to December 31, 2003
Pierce County, Washington
Submitted March 2004

This report describes the ongoing activities of Pierce County in fulfillment of the requirements of the National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for discharges from municipal separate storm sewers (MS3s) for the South Puget Sound Water Quality Management Area, and the portion of the Kitsap Water Quality Management Area located in Pierce County.

Assessment of Stormwater Program Needs (Comprehensive Surface Water Management Basin Plans)

Pierce County progress on developing basin plans slowed in 2003. Basin plans (and accompanying supplemental environmental impact statements) for Clover Creek, Gig Harbor, and Muck Creek basins were published and circulated for public comment, Planning Commission hearing, and were finalized and referred from the Pierce County Executive to the Pierce County Council. The plans were heard in three work sessions of the Council's Economic and Infrastructure Development Committee in Spring 2003. During budget deliberations, the Council chose to require Water Programs to conduct a review of projects and programs and directed the establishment of a Storm and Surface Water Management Advisory Board. One of the functions of the Board is to review and make recommendations on basin plans. Those recommendations are expected in late 2004. Approximately one million dollars is devoted to basin planning in 2004.

Endangered Species Act Activities

Pierce County employs a Special Project Coordinator to deal with habitat protection and restoration issues related to ESA. In addition, an Environmental Biologist works with the Coordinator to bring additional scientific expertise in-house. Special Projects continues to be involved in the following initiatives:

Tri-County

A voluntary coalition of tribes, local governments, business community, and environmental agencies formed a group to see what we could do together to add in habitat protection and restoration issues. It started as a response to the listing of Chinook and bulltrout as threatened under the Endangered Species Act. It evolved into a multi-species (salmonids) recovery effort.

Under the work done by the Tri-County effort, a model for "take liability" (4(d) protection) was developed for road maintenance operations. During 2003 Pierce County's Public Works Department applied for and received the federal approval for incidental take of Chinook which as listed as threatened under the ESA.

Pierce County

Pierce County has undertaken a thorough review of most of the land use/land related regulations and programs to see if they adequately address habitat protection and restoration issue. The issues identified include those in the Tri-County model in addition

to updates on stormwater control, flood management, low impact development guidance, and critical areas (seismic, volcanic, landslide, erosion, mines, wetlands, and fish and wildlife.) Amendments and new sections have been drafted to various sections of the County Code and taken through the public review process at the Planning Commission and the Planning and Environment Committee of the County Council. Issues were identified that needed additional research and review that those were undertaken. The package will be acted on by the Council before December 1, 2004.

Funding was provided by Pierce County to address several habitat initiatives. One of the major projects includes a second phase of analysis of all of the stream reaches within the Puyallup and Chambers/Clover watershed. Just as with the first phase that was done the previous year, this phase was done using a computer modeling system known as the Ecosystem Diagnosis and Treatment Methodology (EDT). Building off the Phase 1 results, habitat protection/restoration priorities are being modeled to see how different combinations of actions could help with the recovery of threatened or at risk salmonid species. This project was started in 2002 and was completed in 2003.

Regional

Special Project staff participates in various regional habitat/water quality, and species recovery activities such as the Puget Sound Nearshore Ecosystem Restoration Project, the South Sound Salmon Recovery Project, Shared Strategies, and other watershed based activities.

Pierce County spent \$642,670 on ESA and habitat related activities in 2003.

Salmon Recovery Program

Water Programs houses the local administration of the State's Salmon Recovery Funding Board (SRFB) program. The Pierce County Lead Entity made major enhancements to the process, roles and responsibilities, strategy, and outreach function in 2003. About \$100,000 is dedicated to this program.

Habitat Protection and Restoration Package

As mentioned above, Pierce County's regulatory update package known as *Directions for Protecting and Restoring Habitat* continues to go through the public hearing process. On March 14, 2003 the revised package became available for public review. The Pierce County Planning Commission conducted a series of six public hearings in March and April of 2003. The Planning Commission approved the March 2003 *Directions* package as amended at their April 23, 2003 public hearing. The package was sent on to the County Council where hearings were held in the Planning and Environment subcommittee during the months of July and August 2003. The package is anticipated to be acted on before the end of December 2004.

Low Impact Development

Low Impact Development (LID) strategies continued to be studied and refined in 2003 by Pierce County.

The Meadow on the Hylebos pilot project (35 single family home subdivision) continues to have predevelopment site conditions monitored by Washington State University Extension for use in later evaluating the effectiveness of the project's LID stormwater practices. Site plans were revised slightly to lessen the grade of individual lots throughout the site. Construction is still anticipated for 2004.

Monthly meetings have been held with Department of Ecology and other Puget Sound jurisdictions to develop consistent standards for LID stormwater credits that could be given when modeling an LID design. A preliminary draft of these credits was completed in 2003 and will be reviewed and finalized for inclusion into an addendum to the Western Washington Hydrologic Model. Also, a technical equivalency paper was drafted to allow porous paving surfaces to be considered to meet the requirements of treatment for water quality prior to discharge to groundwater.

The LID guidance manual is still before the County Council as part of the Directions for Protecting and Restoring Habitat package. In 2003 an EIS was completed for the entire package. During November 2003 budget hearings, a new LID Engineer position was approved, pending approval of the Directions package.

Wetlands Banking

In 2003, Water Programs had no activity in wetlands banking. However, Water Programs budgeted money for professional services in 2004 for the development of a non-commercial wetlands bank and for the acquisition of properties conducive to inclusion in such a bank. Additionally, the Program is adding a wetlands ecologist on staff in 2004. One of the functions of the new staff will be to manage a contract for the development of the bank. While it is not expected to be completed until 2005, we expect to have the framework and some properties in hand by the end of 2004. Approximately \$500,000 is devoted to mitigation banking in 2004.

In the Transportation department, no wetland mitigation or banking sites were constructed in 2003. Monitoring of current mitigation sites took approximately one month. This work utilized approximately 1/4 FTE.

Capital Improvement Program

2003 CIP Accomplishments

Constructed Phase 1 of the Woodland Avenue Pond. Additional land is being acquired to expand the pond in the future. This regional detention pond is designed to prevent the closure of Woodland Avenue due to flooding and to moderate downstream flows. Downstream issues include excessive channel erosion and localized flooding. 2003 Expenditures: \$467,000.

Continued wetland mitigation planting on the western North Fork Clover Creek pond project. This regional detention pond includes several acres of restored wetlands. 2003 Expenditures: \$65,888.

Made significant land acquisition, design and permitting progress toward the 2004 construction of the Soldiers Home Setback levee. This project will open 68 acres of floodplain currently behind an existing levee. The project is being constructed in cooperation with the Corps of Engineers and utilizes SRFB funding because of the large habitat component. 2003 Expenditures: \$13,740.

Coordinated with Roads Division on the enlargement of Brookdale Pit. This existing infiltration pond was upgraded to serve both an upcoming road improvement project and to provide capacity for the entire tributary area. Improvements to the water quality treatment component of the pond are scheduled for 2004. 2003 Expenditures: \$500,000.

Produced final contract plans and specifications for the Spanaway Airport Pipeline. Permitting delays prevented this project from being constructed in 2003 as scheduled. Construction will occur in 2004. This project will restore a traditional high-water flow path ultimately tributary to Coffee Creek. 2003 Expenditures: \$311,800.

Completed the Channel Migration Zone Study for the Puyallup, White and Carbon Rivers. The channel migration zone delineations will be used in the Pierce County development regulations to further restrict new developments in potentially hazardous areas. Further CMZ delineation (South Prairie Creek) is scheduled for 2004. 2003 Expenditures: \$21,511.

Assisted with the review of the first FEMA flood plain re-mapping study in Pierce County since the original maps were produced in 1987. County staff is cooperating closely with FEMA's contractor on the scoping and technical review of the new floodplain studies. In 2004, Pierce County will pay for some additional flood studies, in areas not covered by FEMA's contractor, so that the new maps are as comprehensive as possible. 2003 Expenditures: \$1.5 million.

Floodplain Acquisition. Pierce County pursued an aggressive land acquisition program to preserve natural floodplain areas. 2003 Expenditures: \$2,847,059.

Acquired land and/or did preliminary engineering & permit acquisition for 14 additional future projects.

Total 2003 CIP Expenditures: \$5,015,829.

Activities in Support of Total Maximum Daily Loads (TMDL)

In 2003, Pierce County Water Programs continued normally scheduled activities in the Clover-Chambers basin (containing Steilacoom Lake) such as industrial/commercial inspections, response to complaints and concerns, educational activities, Stream Team monitoring and planting activities, and basin planning activities. The Pierce Conservation District has taken over coordination activities for the Clover Creek Watershed Interim Council for implementation of the Clover-Chambers Watershed Plan.

It is currently unknown when Ecology will proceed on a new TMDL for the Clover Creek-Lake Steilacoom system. Pierce County has stated our willingness to be involved in the development of the new TMDL. In 2002-3, Pierce County, Ecology and a host of other agencies were sued by the Lake Steilacoom Improvement Club (LSIC) over the condition of the lake. The case was dismissed in 2003, and the LSIC appealed the decision to the 9th Circuit Court in San Francisco. In early 2004, settlement discussions are ongoing.

Ecology issued the final South Prairie Creek TMDL in 2003. Although it contains some errors which are disturbing to Pierce County (such as the omission of a Phase 1 permittee (WSDOT) and the identification of some waterbodies as part of the County stormwater system, which they are not), we have decided for now to work with Ecology and other partners in the development of the Detailed Implementation Plan to see if reasonable and proper allocations can be made. The County is currently collecting additional data in the South Prairie Creek basin. Ecology convened a meeting of interested parties to explain the results of additional data collection in 2002 in the Puyallup River TMDL. Low DO continues to be a problem, thereby eliminating the assumed reserve capacity from the original TMDL calculations. Pierce County contributed \$530 toward the long term monitoring efforts in the Puyallup, as agreed to in the Puyallup River TMDL Mediation Agreement. County staff continued to interact with the Forest Service and DOE on the Upper White River TMDL. No new initiatives for County involvement relating to the Lower White River TMDL were brought forward in 2003.

Pierce County is a participant on the City of Puyallup committee for the Clarks Creek/Meeker Ditch TMDL, and attended one meeting on monitoring results in 2003.

River Floodplain Management Activities

REET Land Acquisition

Five (5) separate riverine floodplain parcels were acquired for a purchase cost of \$746,000. The total land area of purchases is 86.2-acres. Three of the parcels contained house structures which demolition and structure relocation is the means of disposal. The parcels will be kept as permanent open space and allowed to revert back to natural conditions.

Repetitive Flood Loss Property Acquisition

Pierce County Water Programs completed acquisition of nine (7) additional repetitive flood loss properties in the lower reach of the Clear Creek system and Clover Creek area. The project includes removal of over ten (10) house structures and outbuildings (including detached garages) from the lots, abandonment of wells/septic systems and final restoration. The purchase cost of the parcels was \$1,334,000 in which the County received a grant from the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program in the amount of \$1,400,000. The County provided a 12.5% cost share amount for the grant. The properties were cleaned up and will be left as open space and allowed to revert back to natural conditions.

Floodplain Map Modification

The County is also working with FEMA on another floodplain mapping project whereas FEMA is funding a project to re-study and map a total of twenty (20) major riverine and creek tributaries. The re-mapping project will include new hydrology and hydraulic modeling for the subject rivers and creeks. This will produce a new 100-year flood inundation map with new computed base flood elevations. The cost of the project is over \$1.5 Million. The floodplain mapping project will also involve the development of a true Digital Flood Insurance Rate Map for Pierce County. The project is anticipated to be mostly complete in 2005.

Puyallup River Soldiers Home Setback Levee Project

Pierce County was successful in obtaining a Salmon Recovery Funding Board (SRFB) Grant to construct a 5,200 Lin-Ft setback levee along the left bank of the Puyallup River along the frontage of the State of Washington Soldiers Home property. The grant award amount is \$990,000 in which the County will cost share with the Army Corps of Engineers to design and build the setback levee that has an estimated project cost of \$3,330,000. The Project Management Plan Phase was completed and the project is currently in the Feasibility Phase. The County was recently informed by the Corps that the project will temporarily be delayed for Year 2004 due to funding issues. The project construction date is now pushed out to summer of 2005.

FEMA NATIONAL FLOOD INSURANCE PROGRAM - COMMUNITY RATING SYSTEM

Pierce County was re-verified into the Community Rating System (CRS) early in 2003. The County will maintain its current rating of a Class 5 community. This entitles property owners who purchase flood insurance to a 25% premium reduction.

Some of the activities that the county earned credit for include the following:

- A.) Elevations Certificates including computer format/database.
- B.) Map Information – publicizing the service in the regional phone book.
- C.) Outreach Projects – production of a video titled “As the Waters Rise”.
- D.) Flood Protection Assistance.
- E.) Open Space Preservation – land acquisition with setback levee projects.
- F.) Higher Regulatory Standards.
- G.) Flood Data Maintenance.
- H.) Stormwater Management.
- I.) Acquisition and Relocation.
- J.) Drainage System Maintenance.
- K.) Flood warning system.

The county continues to strive in implementing new activities and programs all for the benefit of the residents for unincorporated Pierce County and to reduce flood losses within the community.

FLOODPLAIN REGULATIONS

Pierce County Water Programs has developed and prepared a draft set of revised floodplain regulations as part the overall project to update and amend the current Critical Areas Ordinance, as part of the County's response to ESA from the listing of some salmonid species as threatened. The floodplain regulations will be integrated as a critical areas regulation rather than through the Stormwater Management and Site Development manual. The proposed regulations have more stringent development standards than the current in that new requirements will not include channel migration zones, zero rise criteria, more stringent criteria for Deep and/or Fast Flowing water (floodway), minimum house elevation criteria, etc. The draft Critical Area Ordinance was brought forth to the County Council for adoption in 2001. Further Council hearings and workshops will continue as part of the process to ultimately adopt the regulations. The regulations as proposed will reduce flooding impacts to people and property and help to reduce water quality impacts within floodplains.

Nonpoint Source Pollution Control Watershed Action Plans

Pierce County enhanced its support for watershed councils in 2003 to improve action plan implementation. Specifically, Pierce County provided technical and administrative support to the Puyallup River Watershed Council (Upper and Lower Puyallup Action Plans), the Key Peninsula – Gig Harbor – Islands (KGI) Watershed Council (KGI Action Plan), and the Chambers/Clover Watershed Council (Chambers/Clover Action Plan) in 2003. Additionally, Pierce County provided approximately \$5,000 to KGIWSC to start a small environmental grants program and implement an action plan recommendation in 2003. Pierce County has secured budget in 2004 to expand further its support for these councils, including a new watershed coordinator scheduled for hire in May 2004. In 2003, about 0.5 FTEs were dedicated to implementation of the action plans. We project that to exceed one FTE in 2004. This will also enhance the County's ability to address load allocations in effect or under development in the corresponding watersheds.

Controlling Runoff from New Development and Redevelopment

The Development Engineering Section is responsible for ensuring that development and redevelopment occurs in accordance with the requirements of the County's Stormwater Management and Site Development Ordinance. The following is a breakdown of our staffing for the year, along with the percentage of time spent by each employee implementing the requirements of the ordinance.

- A.) We employed four CE2 engineers for the entire year. These employees reviewed the designs of proposed road, storm drainage, clearing, and impervious surface-type projects for compliance with the County's Stormwater Management and Site Development Ordinance. Seventy-five percent of their time was spent implementing the ordinance requirements.
- B.) Two new CE2 positions were created. These staff members started in April and August. The main intent in creating these positions was to assist in the plan review process for larger projects. Since adopting the Department of Ecology standards, we have historically been unable to keep up with our plan review completion

deadlines. The intent of creating these new staff positions was to improve turnaround times and reduce our backlog. These employees reviewed the designs of proposed road, storm drainage, clearing, and impervious surface-type projects for compliance with the County's Stormwater Management and Site Development Ordinance. Seventy-five percent of their time was spent implementing the ordinance requirements.

- C.) One new CE1 position was created. This individual started in July. The main intent in creating this position was to assist in the plan review process for larger projects to improve turnaround times and reduce our backlog. This employee reviewed the design of proposed road, storm drainage, clearing, and impervious surface-type projects for compliance with the County's Stormwater Management and Site Development Ordinance. Seventy-five percent of his time was spent implementing the ordinance requirements.
- D.) We employed one CE2 engineer for the entire year. Forty percent of this employee's time was spent reviewing the designs of proposed road, storm drainage, clearing, and impervious surface-type projects for compliance with the County's Stormwater Management and Site Development Ordinance. The other fifty percent of this employee's time was spent handling complaints and violations related to stormwater, erosion, filling, and flooding. Ninety percent of this employee's time was spent implementing the ordinance requirements.
- E.) We employed four ET3 inspectors for the entire year that performed erosion control and permanent BMP inspections on road, storm drainage, commercial, subdivision, and industrial-type developments. Eighty percent of their time was dedicated to implementing the ordinance requirements.
- F.) We employed two and one-half ET3 inspectors for the entire year to perform erosion control and drainage inspections on single-family home construction. One hundred percent of their time was dedicated to implementing the ordinance requirements.
- G.) We employed one and one-half ET3 inspectors for the entire year. One hundred percent of these employees's time was spent investigating, documenting, and resolving potential violations of the ordinance requirements.
- H.) We employed two and one-half ET3 technical support engineers for the entire year to assist single-family building permit applicants in implementing necessary storm drainage and erosion control BMPs that are a requirement of the ordinance. Seventy-five percent of these employees's time was spent implementing the ordinance requirements.
- I.) One new CE2 position was created. This individual started in August. The main intent in creating this position was to assist in the plan review process and permit intake for smaller single-family type projects and improve our turnaround times.

This employee also assisted single-family building permit applicants in implementing necessary storm drainage and erosion control BMPs that are a requirement of the ordinance. Seventy-five percent of his time was spent implementing the ordinance requirements.

- J.) We employed one CE1 for the entire year. This employee reviewed the designs of proposed road, storm drainage, clearing, and impervious surface-type projects for compliance with the County's Stormwater Management and Site Development Ordinance. Seventy-five percent of this employee's time was spent implementing the ordinance requirements.
- K.) We employed two ET3 survey reviewers for the entire year. These employees reviewed legal documents, easements, agreements, formal plats, and short plats to ensure they met the requirements of the ordinance. Ten percent of these employees's time was spent implementing the ordinance.
- L.) We employed one OA2 office assistant for the entire year to provide support and data input for the Development Engineering inspection staff. Ninety percent of her time was spent providing support to staff for issues relating to ordinance implementation.
- M.) We employed one OA2 office assistant for the entire year to provide administrative support to our CE2, CE1 and ET3 staff. This employee also was responsible for implementing our financial guarantee program. Fifty percent of her time was spent providing support to staff for issues related to ordinance implementation.
- N.) Two new OA2 positions were created. These employees started in March. The main intent in creating these positions was to provide better response and administrative support to our CE2, CE1, and ET3 staff. One of these employees was also responsible for implementing our financial guarantee program. Fifty percent of her time was spent providing support to staff for issues relating to ordinance implementation.
- O.) We employed one Development Engineering Supervisor for the entire year. The supervisor was responsible for directing staff in the implementation of the ordinance. Approximately thirty percent of the supervisor's time was spent on issues related to ordinance implementation.
- P.) We employed one Development Engineering Inspection Supervisor for the year. The supervisor was responsible for directing staff in the implementation of the ordinance. Approximately seventy percent of the supervisor's time was spent on issues related to ordinance interpretation.
- Q.) We retained five engineering firms for the entire year to assist in plan review. Eighty percent of the hours purchased were spent implementing the ordinance.

- R.) We retained one inspector on an extra-hire basis for the year. This inspector performed drainage and erosion control inspections on single-family residence construction. Ninety percent of his time was spent implementing the ordinance.
- S.) We employed three part-time extra hires for a portion of 2003. Fifty to ninety percent of their time was spent implementing the ordinance requirements.

The Development Engineering Section expended approximately \$1,623,000 during 2003 implementing the Stormwater Management and Site Development Ordinance. This amount is higher than last year's expenditures due to the addition of new staff positions.

The Code Enforcement Section of the Planning Department is responsible for investigation and enforcement of numerous County ordinances, and they act as the central clearinghouse for complaints. The Code Enforcement Section supports implementation of the Stormwater Management and Site Development Ordinance by fielding telephone calls and initiating the documentation of complaints pertaining to storm drainage, erosion, sedimentation, and flooding. One employee from Code Enforcement spent twenty percent of his/her time performing these activities. In 2003 the Code Enforcement Section expended \$10,900 supporting the Development Engineering Section in enforcement of the ordinance requirements.

In 2003, 7,300 site development permits were approved. The number of site development permits approved was approximately equal to last year's number (7,450). A site development permit is required whenever proposed construction triggers certain thresholds for the amount of clearing, amount of excavation, or amount of proposed impervious surface. These 7,300 permits covered projects as small as erosion control and storm drainage inspection for single-family home construction on up to stormwater conveyance, quantity, and quality facilities for subdivision or commercial project construction.

A total of 18,072 inspections on permitted projects were performed. This number reflects erosion control inspections, storm drainage system (conveyance, quality, quantity) inspections, and excavation inspections for single-family, subdivision, commercial, and industrial projects. These 18,072 inspections can be further characterized as follows:

- 17,512 of these inspections were associated with projects permitted under the County's Stormwater Management and Site Development Ordinance.
- 14,340 of these 17,512 inspections were associated with single-family residential construction for both temporary erosion control and permanent drainage provisions. The remaining 3,172 were associated with commercial, industrial, short plat, formal plat, and large lot projects.
- 7,422 of the 17,512 total inspections required in association with the Stormwater Management and Site Development Ordinance were of temporary drainage and erosion control measures. The remaining 10,090

pertained to permanent site grading, drainage and site stabilization requirements.

A comparison of the total inspections performed in 2003 to the total inspections in 2002 indicates an increase in inspections by approximately 3,500. This increase can be attributed to an increase in single-family building activity and a more aggressive program of requiring reinspections.

In 2003 the enforcement arm of the Development Engineering Section received requests to investigate 321 problems/requests pertaining to grading, flooding, drainage, and erosion/sedimentation. The following is a breakdown of the nature of these problems/requests:

- 304 - filling and grading
- 10 - flooding of private property
- 3 - flooding related to development
- 2 - blocked ditch
- 1 - blocked culvert
- 1 - potential site development violations

Of these 321 problems/requests, three were on permitted sites and 110 were not violations. Currently these problems/requests are in various stages of resolution. One hundred forty-one of these problems/requests have been resolved; 67 are still awaiting a field inspection or in the enforcement process and are considered active.

A review of our program indicates that the following areas are still problematic:

- Providing plan review turnarounds that meet the expectations of the permittees.
- There are potentially a large number of violation sites that go unaddressed as we currently only respond to complaints, and there are violations that do not draw complaints.
- Bringing violation sites into compliance.
- Actual implementation of temporary erosion control measures by contractors in a timely fashion, especially when inclement weather is due. Implementation of the Annual Scope of Work portion of the Stormwater Management and Site Development Ordinance.

To summarize, the amount of time dedicated to implementing the Stormwater Management and Site Development Manual increased in 2003 due to the addition of new staff positions. The addition of the new CE2 staff position to help review single-family projects has solved our backlog problem in that area, and we are currently meeting our turnaround times for these projects. The addition of the two new CE2 positions, CE1 position, and two new OA2 positions has greatly assisted in our backlog of larger projects; however, we still routinely do not meet our turnaround deadlines for these types of projects. Our inspection work unit continues to be aggressive in their inspections, as is evident from the increase in total number of inspections completed.

It is anticipated that our NPDES expenditures will again increase in 2004 as the six new staff positions will be in place for the entire year.

Groundwater and Shellfish Protection

The Tacoma-Pierce County Health Department's Environmental Health Program activities in 2003 that related to the NPDES Permit included:

- The Environmental Health Program conducted a Recreational Shellfish Program in 2003 with financial and technical assistance from the Washington State Department of Health. Activities conducted included public education and Paralytic Shellfish Poison (PSP) monitoring and notification. Program staff continued to participate in a collaborative effort, initiated by the Washington State Department of Fish and Wildlife, to better work with and educate the Asian-Pacific-Islanders (API) community on recreational shellfish issues. This work included contracting with the Korean Women's Association for API youths to assist with PSP monitoring and educating the community about general shellfish issues. **FTE:** 0.15; **COSTS:** \$12,400.
- The On-Site Sewage Operation & Maintenance (O&M) Program continues to conduct a risk-based program, focusing effort on systems more likely to impact water quality and public health in the event of system malfunction. In 2003 over 4,200 on-site sewage systems of various types were inspected at the time of sale. Approximately 15% of these systems were found to have deficiencies and these were corrected. In addition, approximately 1000 high-risk systems were inspected, as required annually, and approximately 400 commercial systems were inspected, as required annually. The majority of the 4,200 systems inspected for real estate sales were new to the O&M program. Owners of recently sold properties and properties with newly installed septic systems received an as-built drawing, if available, brochures and a video on proper care and maintenance of their system. **FTE:** 5.0; **COSTS:** Approx. \$670,000.
- The Environmental Health Program conducted a freshwater bathing beach sampling program during the summer of 2002 to assess health concerns to swimmers at seven public swimming beaches. Sampling was conducted every other week over the summer for E coli bacteria, water temperature, pH, conductivity, number of water fowl present, and number of swimmers present. The water quality results were generally good to excellent. However, as the summer progressed, water quality deteriorated at the main beach on Spanaway Lake to the point that, in late September, the health department issued a press release recommending that people not swim in the lake. **FTE:** 0.1; **COSTS:** \$8,000.
- A marine beach monitoring pilot project was conducted in the summer of 2003 under EPA's BEACH Program, administered through Ecology. Nine beaches were monitored on a weekly basis from mid-July through September for

conventional parameters and for enterococci bacteria. Water quality was fair to excellent at all of the beaches. **FTE:** 0.1; **COSTS:** \$12,000.

- The Long-Term Ground Water Monitoring Program continued in 2003, with a few changes. The number of wells being sampled by the TPCHD increased slightly to provide a larger data set. Also, approximately fifty of the long-term monitoring wells were sampled late in 2003 for anions/cations (as recommended in a review of the program) and for soluble reactive phosphorus. The program continued to record water quality, water level, and production data from approximately 140 wells throughout Pierce County and also track precipitation at a number of locations in the county. A new lead staff person for the program is expected to be hired in the first quarter of 2004. **FTE:** 1.5; **COSTS:** \$.106,000
- The Environmental Health Program continued working on the Chambers-Clover Management Plan Project. This project, which is being conducted in three phases, will develop a comprehensive water plan for the Chambers-Clover Creek Watershed (WRIA 12). The project is building upon previous planning projects in the watershed and will work in close coordination with Pierce County's ongoing NPDES permit program, the Endangered Species Act response effort, and the nonpoint pollution control efforts (WAC 400-12). As of the end of 2003, the Planning Unit has completed the Technical Assessment of existing conditions and is developing the watershed management plan. The plan is scheduled to be completed and approved by the Planning Unit by June 30, 2004. **FTE:** 0.2; **COSTS:** \$55,340.
- The Environmental Health Program conducted shellfish protection work through funding from Pierce County Public Works and Utilities and through grants. Work conducted in 2003 included contaminant source identification and correction work in eight shellfish watersheds, taking the lead role on the Burley Lagoon Water Quality Protection Team, providing information on shellfish issues at fairs and events, and applying for and receiving a grant to perform shellfish protection work in the shellfish areas on Anderson Island. **FTE:** 1.9; **COSTS:** \$169,500.
- The Environmental Health Program Code Enforcement staff responded to approximately 1,000 solid waste complaints in 2003. These complaints include improper storage or disposal of garbage, putrescible wastes or other debris, improper management of manures, and other issues that can affect surface water. The type of response varied, depending upon the nature of the complaint. The responses included telephone calls, correction letters, and field inspections. 961 unique complaints were received during 2003, and 843 complaints were resolved. This represents a 88% closure rate. These activities required 1,862 site inspections and required over 100 referrals for prosecution and 140 field citations. **FTE:** 4.5; **COSTS:** \$336,000.
- The Environmental Health Program continued implementation of Local Hazardous Waste Management Plan activities. These projects address "small

quantity generator” (business) and household hazardous wastes. Work in 2003 included collaborating with the City of Tacoma and Pierce County on four hazardous waste collection events; these enabled over 1,100 area residents to properly dispose of their hazardous waste. Used oil collection tanks at area transfer stations and two auto parts stores received more than 21,000 gallons of used oil in 2003. A collection tank for used antifreeze received more than 550 gallons during 2003. Work on the EnviroStars Program (recognizing businesses for outstanding hazardous waste management practices) continued; 73 businesses are now certified “EnviroStars” businesses. The Hazardous Waste Line continued operation throughout 2003, receiving 4,200 calls during the year. These specific tasks comprise part of a larger program. **FTE: 1.8; COSTS: \$166,000.**

- The Environmental Health Program required surface water quality monitoring at several permitted solid waste handling facilities in Pierce County in 2002. The required water quality monitoring varies from stormwater discharges at industrial recycling operations to in-stream monitoring at municipal solid waste landfills. Stormwater run-on and run-off controls are required at all solid waste handling facilities in an effort to prevent negative impacts on water quality from the operation of these facilities. The requirements are imposed on the facilities through conditional solid waste handling permits issued under Chapters 173-350 and 173-351, as adopted by the Tacoma-Pierce County Health Department.
- A significant number of properties in Pierce County have commercial underground storage tanks (USTs) that are no longer in use and have yet to be properly abandoned. Some of these tanks may contain free product and pose a threat to groundwater resources or surface water. Additionally, these properties may be idle or not otherwise developed to their full economic potential because of the unaddressed UST issues. Through the Abandoned Commercial Tank Project (Project ACT), the Environmental Health Program is preparing an inventory of historic gas stations in Pierce County. This inventory will identify all properties in Pierce County that have previously housed a gas station, identify the existing use on the property, and compare site information with existing site remediation information available from the Health Department and the Washington State Department of Ecology (Ecology). Staff are currently conducting field visits (‘ground-truthing’) to further understand water resources and other environmental risks, and economic development potential. **Staffing: 1.0 FTE Est.; Cost: \$75,000.**

Environmental Health Program staff also conducted periodic monitoring of numerous closed or abandoned landfills. These sites are monitored for gas generation, potential impacts to groundwater, and possible releases to surface water. The FTEs and costs associated with these efforts are impractical to estimate because the above work is only one component of a much more comprehensive program.

Coordinated Water System Plan

During 2003, the Water Programs Coordinated Water System Program reviewed water system plans for consistency with the Pierce County Coordinated Water System Plan, processed a timely and reasonable service dispute before the Pierce County Hearing Examiner and assisted a “failing” water system and its customers prior to the Department of Health initiating a receivership action. Water Programs continues to support the efforts of the Central Puget Sound Water Supplier’s Forum – a cooperative effort of water suppliers and counties formed to address regional water supply planning, ESA response, water resource issues and public information needs regarding water supply.

Staff also continued participation in the “2514” watershed planning process occurring in the Chambers-Clover Creek, Nisqually and Kitsap WRIAs. On October 31, 2003, the Nisqually Planning Unit approved the Nisqually Watershed Management Plan for submittal to Lewis, Thurston and Pierce Counties for adoption. The Nisqually Watershed Management Plan is intended to serve as a locally-supported, long-term plan focusing on water availability and, to a lesser degree, water quality, habitat and instream flows in the Nisqually Watershed. The Chambers-Clover Creek plan is “due” to the Department of Ecology during 2004 with the Kitsap plan “due” during 2005.

Annexations, Incorporations and Exemptions

There were no incorporations in Pierce County in 2003.

Annexations were quite minor in 2003, with a loss of stormwater fee revenue amounting to only \$2,069.65.

Exemptions included low-income seniors, churches, granges, community centers, tide lands, Indian Trust Lands, cemeteries, parks, Federal lands, credit program for stormwater practices, and forest land. The 85% exemption for public roads is not included in the following figure, as it is rolled into fees. The amount exempted was \$1,479,588.25.

In November 2003, the County Council elected to adjust the SWM fee down by \$5 per parcel. This will produce a revenue loss estimated at \$749,115 beginning in 2004.

Change in Water Quality Status of Waterbodies

Some positive changes occurred in the shellfish areas of Pierce County. The restricted line in Minter Bay was moved north in 2003, resulting in a greater area approved for shellfish harvest. Oro Bay on Anderson Island was reopened to shellfish harvest in 2003. In 2002, in the Filucy Bay shellfish growing area, a downgrade appeared imminent due to lack of a rain gauge close to the area of the bay. Pierce County responded by installing a new rain gauge in the area. Weather on the narrow Key Peninsula can be extremely variable as it comes in off the water. 2003 was the first full year of operation of the gauge, and its use by the Department of Health. Closures have been averted due to the location and use of this gauge.

For a listing of other sites with perceived problems with water quality, refer to the Ecology 2002-2004 303d list.

Industrial Inspection Program

A total of 244 site visits were done. This includes visits to sites categorized as a particular land use type in our Assessor's database, but when we arrived at the site, nothing was there. A list of all sites visited is located in Appendix 1.

Maintenance agreements for new businesses, industries and developments as required by our Stormwater Manual were shifted from PALS to the Water Quality group. We logged them into our inspections database starting in 2001. Inspections of these facilities began in June 2002 and continued in 2003, and they are included in the above total. Our inspectors also work cooperatively with Ecology inspectors on cases as requested (we do not track these separately). Typically, the Ecology inspector calls our inspectors when a non-emergency problem has been reported in the County, and our personnel check out the report and does a site visit, following up with Ecology.

Water Programs inspectors responded to 8 water quality complaints called in directly to the County.

Monitoring Program

As described in the **Assessment of Stormwater Program Needs** section above, Pierce County has a number of detailed basin plans in various stages of completion. As basin plans close their data collection phase by consultants, Water Programs Water Quality Section staff step in to do long-term monitoring at many of these sites, thus increasing our workload to a great degree. The variety of types of monitoring also expanded. To that end, we requested another staff person to assist with monitoring, and that person will be hired in April 2004.

Groundwater level monitoring in support of Capital Improvement Projects and basin plans continued monthly throughout the year. Twenty four well sites were monitored.

Precipitation monitoring at 6 stations within the County continued throughout 2003. Our raingauge data is now available on the Internet.

Biological Index of Benthic Integrity (BIBI) monitoring was done in twenty three creek segments across the county.

Flow and temperature monitoring for 3 basin plans (Muck Creek, Clover Creek and Gig Harbor) were turned over to County staff, and monitoring started or continued in the Clear/Clarks and Mid-Puyallup and Key Peninsula basins.

Fecal coliform monitoring in connection with the shellfish areas at Rocky Bay, Filucy Bay and Burley Lagoon were conducted as storms were available in 2003.

Water Programs also monitored 3 Snotel systems for snowpack during the winter months.

A table of monitoring sites is listed in Appendix 2.

As required each year, personnel did an end-of-pipe check on each outfall in unincorporated Pierce County during the dry summer months. The table of locations and results is in Appendix 3.

In 2003, Water Programs budgeted significant funds in 2004 for the development of a compliance monitoring program for its stormwater discharges. The Program has obtained the services of a consultant team to develop this program and to provide assistance and recommendations on the development of a County TMDL program. Approximately \$300,000 is devoted to this work in 2004.

Education Program

Most of the resources described in this report can be broken down into four funding categories.

Water Resources Education: \$110,000

Household Hazardous Waste Collection Programs: \$187,000

Solid Waste/General Environmental Education & Outreach: \$522,000

Illegal Dumping and Prevention Outreach: \$630,000

Total Expense: \$1,449,000

Source of Funds

Pierce County Water Programs & Sewer Utility: \$131,000

Pierce County Solid Waste Division: \$741,000

Department of Ecology Coordinated Prevention Grant: \$105,000

The preceding excludes:

- 1) the cost of the yard waste collection and composting systems (described herein); and
- 2) management, administration or oversight costs associated with the Water Resources Education and Solid Waste/General Environmental Education programs.

Environmental Education Overview

Four educators on staff provide education and resources to Pierce County residents. In 2003, they gave 749 classroom presentations. Educators also guided field studies, provided consultation services, workshops, trainings, loaned educational resources and equipment, and were invited to, and helped plan, community events. In all, 1,162 outreach efforts reached almost 400,000 Pierce County residents.

A description of the resources referenced above follows:

Classroom Presentations

A selection of environmental presentations is provided for K-12 classrooms, home schoolers, scouts and day camp participants. Each presentation is designed to actively engage students in the topic by encouraging students to discuss the kinds of choices they can make to reduce waste and prevent pollution.

The following presentations were offered:

No Time to Waste

The presentation focuses on where our garbage goes, the elements of a modern landfill, and practical techniques for reducing the amount of garbage that is landfilled (i.e., recycling, precycling and composting) are discussed. Students receive brochures on these topics and teachers are provided with additional curricula and background materials.

Compost Critters

This presentation goes more in-depth about composting; both yard waste and worm composting. Students identify the critters that aid in composting and what food scraps are appropriate to place in a worm bin.

Hazards in the Home

This presentation covers household hazardous products and their alternatives. Students will understand terms on a product label, and how hazardous chemicals can enter our bodies and the environment. Proper disposal and product alternative information is derived from a hazardous waste information wheel.

Bite of the Finite

A role playing game that introduces students to the finite nature of natural resources, as well as the uneven worldwide distribution of these resources. Students simulate mining forays to gather mostly metal resources, and after spending time and energy doing this, find that most of these resources end up in landfills.

Water In, Water Out

Where does our water come from that we use in our communities, and where does it go after we use it? These questions are answered as students are introduced to water basics--the water cycle in reference to our water use--tracing the path of our domestic water supply from aquifer, use, discharge and treatment. Students learn about septic systems or wastewater treatment plants, depending upon what system is used in their school area.

Water We Doing?

Students switch perspective from human to salmon in this presentation to discover how our everyday activities may affect aquatic wildlife. Ways to reduce nonpoint pollution

and establish simple, good habits are discussed. Students receive handouts and teachers receive curricula on water topics.

Watersheds and You

This interactive program exposes students to the dynamics of land and water that define a watershed. They learn about human activities that affect watershed processes that are vital to our community's ecological health. Students and teachers receive materials on water topics.

Benthic Macroinvertebrates

Students learn about aquatic bugs, the roles they play, why they're important, their life cycles, and why they are water quality indicators. The presentation can include using cards to learn about metamorphosis, and viewing either preserved or live samples.

Field Investigations

Because it is easier to teach about the environment when you can get people outdoors interacting with nature, the educators provide opportunities for students, teachers and citizens to participate in field work and stewardship activities. Students learn how to collect and test water samples for a variety of pollutants. They discover how to assess the health of a stream by studying the kinds of aquatic insects they find in it. And they learn that observing things at the site is one of the best techniques for gaining information. Most consultations are for some type of field work and planning.

ADULT WORKSHOPS

Worm Composting

This workshop was offered nine times in 2003 through Tacoma Community Colleges in Tacoma and Gig Harbor, and a few community organizations such as garden clubs. Over 300 participants learned how to set up and maintain a worm bin to reduce kitchen waste. The resulting worm compost can be added to the soil as an organic fertilizer, reducing the dependence on chemical fertilizers and pesticides, and helping to retain soil moisture.

OTHER OUTREACH EFFORTS

Tacoma-Pierce County Children's Water Festival

2003 saw the first coordinated effort to having a comprehensive, day-long water festival for 5th-grade students in Pierce County, modeled after the Kitsap Water Festival. The Tacoma-Pierce County Health Department spearheaded the effort along with the City of Tacoma, Tacoma Power, and the Pierce County Environmental Services Division. Local environmental educators and volunteers from community groups gave numerous presentations about many aspects of water. The Festival was held at the Tacoma Community College campus on Thursday, March 27th, and 525 students from seven different schools attended. Feedback was very positive, and a larger Festival for 2004 will be held at the University of Puget Sound.

Educational Resources and Equipment for Loan

Many of the resources available for checkout were purchased with Centennial Clean Water Fund grant money. Since the grant has been completed, we no longer track exactly how many teachers, students and citizens check out the various resources, but a consistent, if not abundant, number of people continue to use the resources. Among the resources available are videos, resource books, curriculum guides, water quality testing kits, macroinvertebrate sampling kits, and activity kits such as storm drain stenciling kits, "The Incredible Journey," and groundwater and Enviro-scape models.

Benthic Index of Biological Integrity (B-IBI)

The B-IBI is a sampling method to assess water quality using biological indicators, namely, benthic macroinvertebrates. Partners in this endeavor in 2003 included the Pierce Conservation District, the City of University Place, and the Puyallup and Nisqually Tribes. Water Programs became the lead agency for this program in 2001 and has incorporated it into its overall monitoring program. Twenty-four streams were sampled in 2003. Pierce County Environmental Services is developing a basin summary, for each stream and for all years sampled (beginning in 1999), of existing conditions based upon the results of the B-IBI sampling, and is very close to putting the summaries on its website so citizens can have access to this information.

Western Washington Fair

The Pierce County Solid Waste Division's **GreenHouse** continued incorporating water conservation displays into the house and landscaping in 2003. Two water collection systems were shown: a simple rain barrel and a water collection cistern for roof runoff. Also displayed were drip irrigation systems and micro-sprinklers, as well as the water- and electricity-saving home appliances shown annually. Approximately 200,000 of the 1.2 million fairgoers walked through the exhibit.

Puyallup Spring Fair

Pierce County Solid Waste Division and organizations from both the public and private sector came together to bring fun, interactive, hands-on activities, to educate people about some of today's most pressing environmental issues. The 7,400 square foot exhibit included the Environmental Shopping Game, the Environmental Wheel, the game *Who Wants To Be A Recycler?*, and the Salmon Survival Game, where participants travel downstream towards Puget Sound as salmon fry and encounter many of the ways in which people unknowingly degrade water quality and salmon habitat. Children of all ages created spring hats and worm bins from recycled items. Our sustainable home setting featured products made from recycled materials, energy-efficient appliances, and compact fluorescent lights. The exhibit also featured natural gas and electric vehicles. The Puyallup Spring Fair was attended by more than 90,000 people.

Pierce County Solid Waste Newsletter

Each of the two Waste Reducers newsletters (spring and winter editions) were sent to approximately 200,000 single-family and multi-family residences in Pierce County

during 2003. Topics included: Pierce County Responds - our new aggressive program to resolve illegal dumping issues, the education presentations referenced above, the recycling and disposal resource guide on our website, Bag Hunger canned food drive, the Electronics Recycling Event, Parks Appreciation Day, Nature FEST, living Green at the Puyallup Fair - The **GreenHouse** Exhibit, earth-friendly holiday tips, winter road preparedness, and information about the County's plans for reducing its flooding problems. The newsletter will continue to be a valuable way to get information about water issues to Pierce County citizens.

Household Hazardous Waste Management

Pierce County and the City of Tacoma continue to partner in the collection of household hazardous wastes. County residents have access to Tacoma's permanent facility. In addition, Pierce County partnered with Tacoma and the Tacoma-Pierce County Health Department to provide satellite household hazardous waste collection events in Key Center, Steilacoom, Graham, and Eatonville. The County's efforts resulted in collecting 170,760 pounds of materials from 4,269 residents in 2003.

Household Hazardous Waste Information Line (253) 798-4115

Our automated phone line gives information on how to safely dispose of hazardous household wastes in Pierce County. In 2003, 361 people used the phone line as a resource.

Yardwaste Composting Program

Pierce County provides curbside collection and self haul options for yard waste. In 2002, the County's contractor made the decision not to keep track of the amount of yard waste processed in the program, but it continues to be a valuable method of not only saving landfill space, but also creating another recycled resource, as the resulting compost is available at local landscaping supply companies.

Pierce County Responds

Pierce County launched a major initiative during 2002 which provides a comprehensive response to the problem of illegal dumping of waste and nuisance vehicles. Pierce County Responds brings together staff and resources from Pierce County Public Works & Utilities, Planning & Land Services, the Sheriff, the Prosecuting Attorney, and the Tacoma-Pierce County Health Department. Pierce County Responds receives and investigates complaints about illegal dumping, recommends cases for prosecution, organizes volunteer cleanups, and educates citizens on safe and proper recycling and disposal methods.

Pierce County's new Nuisance Vehicle Law took effect on July 1, 2003 with formal enforcement commencing on December 15, 2003 following a public information campaign. Pierce County will contract with eleven tow truck companies to remove nuisance vehicles from private properties throughout unincorporated Pierce County. To be eligible for removal under the County's program, the vehicles must be causing a public nuisance (which can include impacts to air and water quality) and meet

established definitions for “junk vehicles.” Pierce County expects to be able to remove at least 1,500 vehicles a year through this program.

By the end of 2003, Pierce County had accomplished the cleanup of eleven of fifteen sites which had appeared on its “Dirty Dozen” list of illegal dumpsites. Two more sites were in the process of being cleaned and the final two were still in litigation. Pierce County partnered with other agencies to affect the cleanup of properties which had ties to drug activity and other crimes. During 2004, Pierce County Responds will be looking to expand this partnership to target sites which have other environmental problems. The goal is to help improve water quality, watershed, and habitat issues while addressing the core mission of removing illegally dumped waste and vehicles.

WEBSITE INFORMATION

The Green Book

This directory of environmental education opportunities in Pierce County is becoming known as a valuable resource for formal and informal educators who are planning environmental curricula and are looking for speakers, resources, and field trips. The *Green Book* includes sections on Ecology & Habitat, Zoos and Parks, Natural Resource/Waste Reduction, Water, Watershed Groups, Volunteer Opportunities, and Teacher Resources. The *Green Book* is on the County's Environmental Services website, with a number of directories being distributed to schools, libraries and agencies in Pierce County.

Environmental Services Website -- www.piercecountywa.org/environmental

Pierce County Environmental Services now provides a variety of information on its website. All of the separate departments within Environmental Services list their programs, plans, and ongoing efforts to keep water clean. They also provide opportunities for citizens to participate in these efforts with information and links to volunteer organizations and planning groups. The website provides tips on how individuals can reduce their impacts on the environment: information on nonpoint pollution, alternatives to hazardous products, green gardening, and with the Recycling and Resource Disposal Guide, citizens can get information on where to recycle difficult wastes such as construction/demolition debris and automotive oil and anti-freeze.

Water Programs conducted an outreach gap analysis in 2003 and used that to develop a budget for increased outreach services. As a result, in 2004 the program is investing more than \$120,000 in outreach services, including development of displays, materials, and events on water issues. Some of these resources will be shared with watershed councils. Additionally, a new environmental educator will be added to staff in late 2004.

Operation and Maintenance of Stormwater Facilities (Water Programs)

Pond Maintenance

In 2003, 153 ponds were maintained. Maintenance activities include, but are not limited to, structure repair and/or upgrades, clearing, grading, sloping, excavation, vegetation

management, mulching, fencing, hydroseeding, and trash control. Total cost was \$522,059.

Creek Maintenance

In 2003, crews performed maintenance on 1 creek and 7 major ditch systems in unincorporated Pierce County. The work consisted primarily of vegetation management and/or silt removal from designed traps. The work was performed by County maintenance crews, as well as our District Court Probation/Detention crews at a cost of \$94,678.

Drainage Concerns

Drainage concerns called in to the County's Flooding and Storm Drainage Concerns phone number (253-798-4274) are entered onto the Service Response System database, and delegated to the proper department for action. The numbers listed below reflect only complaints handled by Water Programs. Please see **Operation and Maintenance of Streets and Roads** and **Controlling Runoff from New Development and Redevelopment** for the SRS information for Roads and PALS. Water Programs handled:

259 drainage concerns logged

123 visited

38 closed with resolution

9 closed without resolution

15 remain active

Small Works Projects

Water Programs Maintenance Section conducts a Small Works Program for projects that are in need of attention, but too small to qualify as regional facilities under our Capital Improvement Program. In 2003, \$223,827 was spent on these projects to improve storm drainage conveyance and improve water quality.

Vegetation Control (Riverine Area)

Vegetation control is multi-benefit. We must keep access-ways clear of unruly and/or non-indigenous vegetation for maintenance crew activities, as well as for avoidance of structural damage to the levee and flood abatement structure. This work must be accomplished with compliance to Tribal agreements and regulatory codes, while also maintaining vegetation that is conducive and beneficial to the fisheries resource. This work continues on a yearly basis.

In summer 2003, a full crew was dedicated to pulling and disposing of noxious weeds along the Puyallup River System. The crew also performed vegetation management in 57 ponds.

Detention Crew

In 2003, Pierce County Water Programs utilized jail crews to assist in pond clearing and brushing, trash pickup, demolition and disposal of floodprone homes and property, fence construction, creek and ditch clearing and/or enhancement. The total cost was \$93,750, with an actual man-hour value (at \$12 per hour) of \$214,000.

River Maintenance

In 2003, Pierce County Water Programs crews performed levee repair and maintenance, concrete armor cleaning, brush cutting and access road maintenance (along 39 miles of the Puyallup, Carbon and Nisqually Rivers). Miscellaneous activities, such as signage, access restriction, trash control, and gate repair were also done at acquired floodplain properties.

Operation and Maintenance of Streets and Roads

Pierce County has adopted an approach to vegetation management referred to as Integrated Vegetation Management or (IVM). IVM is a coordinated decision making and action approach to vegetation management that utilizes regular monitoring to determine if, when, where, and how treatments are needed. The approach emphasizes chemical, mechanical, cultural, and biological methods to control nuisance vegetation while at the same time encouraging the growth and spread of low maintenance native vegetation when possible. The ultimate goal of IVM is to prevent damage to the roadway, eliminate public safety hazards, control the spread and establishment of unwanted vegetation, and protect the environment. When chemical controls are necessary, they will be the least toxic available for the task and will be used in conjunction with other control methods that are effective or practical.

In Pierce County, chemical control is contracted out. 1500 acres of road shoulder was the maximum treated area in the budget for the soil residual program in zone 1. Our contractor found it appropriate to spray only 1,051 acres. These activities ideally are scheduled between April 1st and May 15th. The chemical products applied for this treatment and the amount of active ingredient used are as follow:

Diuron 4L herbicide	2,100 gal. = 8400 lbs. of active ingredient
Landmark MP	6,300 oz. = 295 lbs. of active ingredient
Roundup Pro Concentrate	240 gal. = 1200 lbs of active ingredient glyphosate

The noxious weed control treatments in the road right-of-way and other sites, as directed by the Pierce County Noxious Weed Control Board, are ideally carried out between April 1st and October 1st. The chemical products applied for this treatment and the amount of active ingredient used are as follow:

Curtail	5 gal. = 18.4 lbs. of active ingredient
Escort (VM)	16 oz. = 6 lbs. of active ingredient

1500 shoulder miles was the maximum treated area in the budget for the brush control program in zones 2 & 3. It was an administrative decision not to run this program in 2003.

Pierce County Road Operations (PCRO) has fully implemented the Regional Road Maintenance Endangered Species Act program which was officially approved by the National Marine Fisheries Service on August 15 of 2003. PCRO in conjunction with the Regional Road Maintenance Forum is now working on receiving program approval from the United States Fish and Wildlife Service for listed species under their jurisdiction. The program will require the implementation of the program elements listed below in order to obtain 4(d) coverage under the Endangered Species Act: waste leftover materials

- 1 Regional Forum
- 2 Program Review and Approval
- 3 Training
- 4 Compliance Monitoring
- 5 Scientific Research
- 6 Adaptive Management
- 7 Emergency Response
- 8 Biological Data Collection
- 9 Biennial Reporting to NMFS and USFWS
- 10 Best Management Practices and Conservation Outcomes

One of the most important components of the program is the training and use of Best Management Practices BMP(s) to prevent erosion and protect water quality. All field staff within PCRO will be required to attend a comprehensive training program on the principles of erosion and sediment control and identification and conservation of critical habitats. Class curriculum is developed by the University of Washington. As of January 1, 2004, 120 persons have been through the training.

A system has been developed to track the use of BMP(s) for every job completed by PCRO. Routine BMP checklists are completed for routine work with minimal potential for environmental harm. Work that disturbs soils or that may have the potential for adverse environmental impacts will have additional checklists to ensure that BMP(s) are installed correctly and functioning properly. This information will also be used to determine which BMP(s) are most effective. This information will be summarized and reported to the services on a quarterly basis.

SUMMARY OF WORK COMPLETED BY PIERCE COUNTY ROAD OPERATIONS IN 2003 BY MAINTENANCE FUNCTION

Function	Planned	Actual	Spent \$
Ditching with Backhoe (In Feet)	23,661	60,484	218,764.30
Ditching with Excavator (In Feet)	6,800	44	1,291.98
Beltloading (Per Mile)	38	.2	2,924.98
Manually Clean Culvert Ends (Each)	9,118	3,809	34,497.30
Mechanically Clean Culvert Ends (Each)	1,062	702	35,059.80
Grate Tops Cleaned (Each)	1,635	2,647	15,978.03
Mechanically Clean Catch Basins (Each)	4,995	2,130	144,740.55
Jet Rodding (Linear Feet)	117,492	67,419	118,750.07
Repair/Replace Culvert Pipe (Linear Feet)	6,000	3,423	220,349.40
Repair/Replace Catch Basin (Labor Hour)	114	76	64,910.44
Repair/Replace Drywells (Labor Hour)	621	11	23,738.49
Erosion Control (Labor Hour)	890	902	30,739.19
Ditching with Ditchmaster (In Miles)	275	577	164,792.75
Self Contained Street Sweeping (Curb Miles)	4,056	4,207	335,512.86
Litter Removal (Shoulder Miles)	118	27	3,174

Function	Planned	Actual	Spent \$
Illegal Roadside Dumping (Labor Hour)	0	367	22,034.71
Hydroseeding (Square Yard)	0	4,000	5,398.36
Handseeding (Labor Hour)	0	5	174.38

SRS Service Response System:

Per the reports generated by the SRS system, in **2003** we:

Received 185 drainage concerns

Active problems 147

Closed with resolution 388 drainage concerns

Closed without resolution 15

The reason for the discrepancy in closing more that were received is due to concerns from previous years that were not resolved until 2003.

Vector Stations: Pierce County Road Operations currently operates 2 vector waste facilities. These facilities were developed in coordination with the Tacoma-Pierce County Health Department to properly control, test, and recycle vector wastes generated by our maintenance activities. Annual reports are submitted to the TPCHD in order to ensure proper operation, and renew the permit for operation for the next year. The latest task for the Tri-County ESA roads forum has been to meet with Ecology and the local health departments to develop a vector soils reuse policy. Pierce County has been participating in that discussion. It has brought up an interesting question, based on what Ecology Solid Waste employees have stated, and that is, if the local health authority has to adopt the current Ecology regulations (or more stringent) for solid waste, and is the local agency for enforcing said regulations, why is there any mention of vector wastes in the NPDES stormwater permit? We will be asking this question when we resume negotiations on our Phase 1 permit.

Watershed-wide Coordination Activities

The Phase 1 permittees met in person once in 2003 to discuss NPDES issues. However, several of the entities were very active in Legislative issues in Olympia, and frequent communication via email on various issues occurred all year. The Phase 1 entities were active participants in the Westside Stormwater Committee.

Pierce County continued to be active in all aspects of the Tri-County process, and we are lead entity for the 2496 salmon recovery process. Watershed councils are active in all watersheds in the County. County personnel also participate in the 2514 process.

Adequate Information to Conduct Planning, Priority Setting and Program Evaluation Activities

Mapping. Mapping activities relating to floodplains were described under **River Activities** above, and were valued at \$1.2 million for 2003-2005. Utility funds continued to support the drainage system inventory and periodic aerial re-flights of the County.

Water Programs continues to employ one technician working full time on maps for drainage inventory, CIP projects, basin plans, watershed plans, monitoring sites for water quality and water quantity, and for special projects or requests. Water Programs also continues to pay a large share to the GIS Division for upkeep of GIS coverages. This does not include upkeep of the new drainage maps, which were completed in 2002. Roads, Water Programs, and Information Services have a dedicated field crew to field check and map new features (public and private facilities) as they are built.

Pesticide Management

Fertilizer and Pesticide Use

2003 showed Pierce County Parks and Recreation continuing to improve in the tracking and recording of fertilizer and pesticide usage. We will continue to implement improvements in our recording process next year.

Although each summer presents a different set of circumstances due to weather patterns and natural precipitation, we are doing everything we can to present facilities and parks that are pleasing to our customers and friendly to the environment we all share.

We made the commitment to use appropriate materials as minimally as possible. Product applications for the calendar year 2003 followed a similar pattern to 2002, although we reduced our treated acreage and use of fertilizers. We do this while fulfilling our mission “to provide well maintained and functional park facilities.” We plan to continue that commitment.

We spend significantly more time and money in training in this particular area than in any other area of our profession. We continue to send most of our full-time employees to training annually on the safe and proper techniques of fertilizer and pesticide handling, mixing and application.

Our profession and material suppliers continue to work hard at improving materials, standards, and techniques.

As professionals in an industry that is scrutinized in this area, we take very seriously the stewardship of our facilities and their use and enjoyment by the public we serve.

Tables of our properties, training activities, application practices and chemical usage follow.

PIERCE COUNTY PARKS

Pesticides and Fertilizers

2003

	<u>Total</u> <u>Acres</u>	<u>Treated</u> <u>Acres</u>	<u>Times</u> <u>Applied</u> <u>Per Year</u>	<u>Total</u> <u>Applied</u> <u>Per Year</u>	Meas.	Description of Treated Areas
PARKS DIVISION	1942.6	48.1				

Fertilizer 18-3-18 30% SCU

Spanaway Park	135					
Spanaway House		0.3	1	50.0	lbs	Formal lawn areas
Spanaway Park-Phy Fit #5-6		10.0	1	1,250.0	lbs	Mowed grass areas
Spanaway Park-#1 Banks		0.5	1	85.0	lbs	Formal lawn areas
Ft. Steil. Park (house/picnic/fields)	343	23.5	4	6,950.0	lbs	Sports fields, picnic area, lawn
Frontier Park	60	2.5	2	500.0	lbs	Mowed grass areas by Residence
Lake Tapps Park	80	4.4	3	1,650.0	lbs	Mowed grass areas throughout Park
Western State Ballfield	4	3.5	4	2,000.0	lbs	Ballfields
<u>Scotts Turf Builder</u>						
Dawson		0.6	1	150.0	lbs	Mowed grass area
Lake Tapps		0.5	2	120.0	lbs	Residence & concession lawns
Spanaway Park - Area #1			1	120.0	lbs	Mowed grass area
<u>NuLife Weed & Feed w/Trimec</u>						
Spanaway Park-Entrance #1			1	160.0	lbs	Mowed grass areas
Spanaway Park - Area #2-3		2.0	1	80.0	lbs	Mowed grass areas
<u>Herbicides</u>						
<u>Round-Up Pro (1oz/128oz)</u>						
Dawson Playfield			1	18.0	oz	Fence lines, curbs, picnic area
Frontier Park		0.1	4	2.0	gal	Fence lines & spot spray
Ft. Steilacoom Park			1	8.0	oz	Athletic field lining, curbs, pathways
Ft. Steilacoom Park			3	5.4	gal	Spot spray for noxious weeds
Western State Ballfield			2	16.0	oz	Spot spray parking lot & curbs
Spanaway Park			3	44.0	oz	Fence lines, edge curbs, spot spray weeds
Lake Tapps Park			5	5.5	gal	Curbs, parking lot, spot spray weeds, road edges, walkways
<u>Weedmaster</u>						
McMillin Trail Head			1	20.0	oz	Spot spray Tansy Ragwort & Poison Hemlock
Orange Gate Property			1	10.0	oz	Spot spray Tansy Ragwort
Spanaway Park	2 Miles		1	28.0	oz	Curbs
<u>Moss Out (Liquid & Granular)</u>						
Lake Tapps (20# granular)		0.3	1	80.00	lbs	Residence & concession lawns
Lake Tapps (liquid - 1gal/2000sf)			1	7.00	gal	Residence & concession lawns
Spanaway Park			1	120.0	lbs	Formal lawns
Frontier Park			1	30.0	lbs	11 Buildings Roofs (33,504 sq ft)
GOLF DIVISION						
Fort Steilacoom Golf Course	160	60.0				
	55	14.0				
<u>Fertilizers</u>						
18-3-18 Large Prill		12.0	5	6,000.0	lbs	Fairways
18-3-18 Med Prill		1.0	5	1,250.0	lbs	Tees & surrounds
18-9-18 Small Prill		0.5	8	1,000.0	lbs	Greens
18-3-18 Med Prill		0.5	5	625.0	lbs	Greens surrounds
Pro Scape 14-2-14		0.5	5	520.0	lbs	Greens
Soil Aide		0.5	3	7.5	gal	Greens
Spreader/Sticker R11		0.5	6	120.0	oz	Greens
<u>Fungicides</u>						
Fore Flowable		0.5	5	6.3	gal	Greens
Daconil 2787		0.5	6	7.5	gal	Greens
Herbicides (gal/acre)						

Round-Up Pro	0.3	2	37.0 oz	Fairways & Irrigated Roughs
Lake Spanaway Golf Course				
<u>Fertilizers</u>				
18-3-18 Large Prill	60.0	2	9,500.0 lbs	Fairways & Irrigated Roughs
NX Pro Medium Prill	3.5	3	850.0 lbs	Tees & surrounds
Calpril (Lime)	3.5	2	3,500.0 lbs	Greens
Anderson 18-9-18	3.5	1	550.0 lbs	Greens
United Fertilizer	3.5	2	1,200.0 lbs	Tees
Anderson 23-1-10	1.0	1	350.0 lbs	Temporary Greens
Peters Soulable Fert. 25-3-30	3.5	6	375.0 lbs	Greens
Supertrace w/40% iron	3.5	2	10.0 gal	Greens
Nutra Culture 20-20-20	3.5	2	100.0 lbs	Greens
Opti-Gro Bio Turf	3.5	6	20.0 gal	Greens
Opti-Gro Durlizer	3.5	1	2.5 gal	Greens
Opti-Gro Iron Aide & Soil Aide	3.5	4	27.5 gal	Greens & surrounds
Opti-Gro Soil Aid	3.5	3	17.5 gal	Greens
Opti-Gro Hydra Turf	3.5	2	10.0 gal	Greens
Protesyn	3.5	1	5.0 gal	Greens
Now 4-4-16	3.5	1	5.0 gal	Greens
Micro Treat	3.5	1	10.0 gal	Greens
Astron	3.5	1	5.0 gal	Greens
Sticker Activator R11	3.5	10	4.0 gal	Greens & surrounds
<u>Herbicides</u>				
Roundup Pro		2	2.5 gal	Fences
<u>Fungicide Fertilizer</u>				
Proscape 14-2-14	3.5	2	880.0 lbs	Greens
<u>Fungicides</u>				
Fore XL Flowable	3.5	1	3.5 gal	Greens
Cleary's 3336	3.5	2	5.0 gal	Greens
Chipco 26GT	3.5	4	17.5 gal	Greens
Daconil	3.5	2	10.0 gal	Greens
Echo Co-Pack	3.5	3	152.0 oz	Greens
Dithane	3.5	2	24.0 lbs	Greens
Bayleton 50 Wettable	3.5	1	3.8 lbs	Greens
Pro Turf Fluid Fungicide	3.5	1	1.5 liters	Greens
REC CENTERS DIVISION	108.5	21.1		
Sprinker Rec Center				
<u>Fertilizers 18-3-18</u>	19.1	4	13,400.0 lbs	Sports fields & formal lawns
<u>Herbicides</u>				
Round-Up Pro (2oz/gal) / SRC	2.0	2	4.0 gal	Fence lines, parking lot
<u>Confront</u>				
	12.5	1	3.0 gal	Athletic fields
<u>Diazinon</u>				
		1	2.0 pint	Treat cherry trees for aphid
<u>Weed-B-Gone</u>				
		2	0.5 gal	Spot spray fields & groomed lawns
Lakewood Community Center				
Round-Up Pro (3oz/gal)	2.5	2	2.5 gal	Spot spray for weeds-beds, parking lot

GROUNDS DIVISION	80	37.4				
<u>Fertilizers</u>						
18-3-18 30% SCU	6.4	20	9,125.0	lbs	Formal lawns	
Best 9-9-9	4.8	4	3,950.0	lbs	Perennial flower beds & roses	
Calpril (Soil Amendment)	4.1	1	100.0	lbs	Formal lawns	
<u>Herbicides</u>						
Crossbow			0.7	gal	Spot spray Blackberries, Broom and Alders	
Mec Amine-D Turf	4.2	3	0.5	gal	Hard surfaces, formal lawns, spot spraying	
Round-Up Pro	25.8	6	3.5	gal	Curbs, pavements, beds, spot spraying	
Surflan A.S.	2.6	3	0.60	gal	Hard surfaces, edges	
Scythe	23.6	2	1.10	gal	Hard surfaces, bedding areas	
<u>Insecticides</u>						
Metasystox-R	0.9	1	4.2	gal	Lawn areas to root feed trees	
Total Acres / Treated Acres	2346.1	180.6				
Parks	1942.6	48.1				
Golf Courses	215.0	74.0				
Recreation Centers	108.5	21.1				
Grounds Division	80.0	37.4				
Total Regularly Maintained	741					
Total Minimally Unmaintained	1625					

PIERCE COUNTY PARKS - 2003 TRAINING

<u>Training Received</u>	<u># Hours</u>	<u>Course Cost</u>	<u>Avg.Salary</u>	<u>Total Cost</u>
Pesticide Classes				
Parks Employees (9)	128	560.00	28.93	4,263.04
Golf Courses (7)	136	525.00	27.73	4,296.28
Grounds (6)	88	385.00	25.83	2,658.04
Integrated Plant Health Management (pesticide credits)				
Parks Employees (1)	24	150.00	25.35	758.40
Athletic Field/Sport Turf Workshop				
PNSTMA - Parks Employees (6)	48	330.00	25.83	1,569.84
Northwest Turfgrass Assoc Conference				
Toby Lirot	32	572.91	30.30	1,542.51
Scott Tyson	32	489.00	30.30	1,458.60
United Pipe - Irrigation Training				

Parks Employees (2)	16	300.00	32.86	825.76
Washington Turf & Landscape (Pesticide credits)				
Andrew Soden	16	110.00	38.19	721.04
Becky Little	16	110.00	26.77	538.32
Bob Cady	16	110.00	31.60	615.60
WWGCSA Crew Seminars/USGA				
Andrew Soden	8	55.00	38.19	360.52
Scott Tyson	16	110.00	30.30	594.80
TOTALS	576	\$3,806.91		\$20,202.75

**Pierce County Parks &
Recreation**

Property	# Acres	Maintained	Unmaintained			
Parks						
Chambers Creek Park	195.4	-	195.4			
Crescent Lake Park	2	-	2.0			
Dawson Playfield	5	5.0	-		Total	Treated
Foothills Trail	363	-	363.0			
Fox Island Ferry Landing	0.5	-	0.5	Total Acres / Treated	2346	188.1
Fox Island Fishing Pier	5.5	5.5	-	Parks	1942	55.6
Frontier Park	60	30.0	30.0	Golf Courses	215	74
Ft Steilacoom	343	80.0	263.0	Recreation Centers	109	21.1
Gonyea Playfield	14	14.0	-	Grounds Division	80	37.4
Grandview Trail	3.7	3.7	-			
Hales Pass Comm. Ctr.	4	4.0	-			
Half Dollar Park	3	-	3.0	Total Acres	2346	
Herron Point	1.5	-	1.5	Total Maintained	758	
Lake Tapps North	80	40.0	40.0	Total Unmaintained	1588	
Lidford Playfield	10	10.0	-			
Mayfair Playfield	4	4.0	-			
Narrows Property	36	2.0	34.0			
Old Settlers Cemetary	2.5	2.5	-			
Oranegate Property	160	-	160.0			
Parkland Habitat	4.5	-	4.5			
Peninsula Recreation Area	22	-	22.0			
Powerline (Cushman) Trail	9.5	9.5	-			
Purdy Sand Spit	7.5	7.5	-			
Puyallup River Levee Trail	54.5	-	54.5			
Rimrock Park	140	-	140.0			
Riverside Park	50	-	50.0			
Rosedale Playfield	2	2.0	-			
Seeley Lake	48	10.0	38.0			
South Hill Park	40	40.0	-			
Spanaway Park	135	135.0	-	Spanaway Park		
Sunrise Beach Park	82	6.0	76.0	#4 Parking Lot Bank	0.25	
Swan Creek	40	10.0	30.0	House	0.25	
Towhead Island Boat Launch	1	-	1.0	Islands	2	
Tule Lake-Hope 3	3.5	-	3.5	Physical Fitness	10	

Project/Park					
Western State Ballfield	4	4.0	-	Curbs, fenceline, pathways	2.5 miles
Wilkeson Creek Park	6	-	6.0		
Subtotal	1942.6	424.7	1,517.9		
Rec Centers					
Bresemann Forest	70	-	70.0		
Lakewood Comm. Ctr.	3.5	3.5	-		
Sprinker Recreation Center	35	35.0	-		
Subtotal	108.5	38.5	70.0		
Golf Courses	215	215.0	-		
Grounds	80	80.0	-		
TOTALS	2346.1	758.2	1,587.9		

Conservation Futures Program

The Conservation Futures Program consists of moneys collected from each property in the County to purchase and preserve noteworthy properties.

The Pierce County Conservation Futures Citizens' Advisory Board reviewed property nominations, and makes the following findings and conclusions:

Conservation Future Purchases (2003)

Project Name	Findings and Conclusions
The Naches Trail Preserve	
Sponsor	Clover Creek Council
Title to be held by	Cascade Land Conservancy
Parcel size	Approximately 64.03 acres
Parcel number	03-19-25-2-005, 03-19-25-3-002
Property location	4002 Old Military Road East
Current use	Vacant
Open space attributes	Critical Salmon Habitat, Fish and Wildlife, Streams, Wetlands, Wooded areas, Aquifer Recharge area, Flood Hazard area, Archaeological Site, Historic Landmark Site and Landslide area.
Other attributes	The property is within the County CUGA and 5 acres or greater in area.
Conclusions	Public acquisition would assure protection of this reach of Clover Creek, wetlands and fescue prairie as well as a Garry Oak woodland.
Acquisition cost	\$603,601.00
Project Name	Findings and Conclusions

Project Name	Findings and Conclusions
The Cross Property on Clover Creek	
Sponsor	Frederickson Community Planning Board
Title to be held by	Pierce County
Parcel size	Approximately 65 acres
Parcel number	03-19-25-2-018, 3-014, 3-700, 4-026 and 4-066
Property location	418 Military Road East adjacent to the Naches Trail Preserve Site
Current use	Horse ranch and residence
Open space attributes	Critical Salmon Habitat, Fish and Wildlife, Streams, Wetlands, Wooded areas, Agricultural Land, Aquifer Recharge area, Flood Hazard area, Steep Slopes
Other attributes	The property is within the County CUGA and 5 acres or greater in area.
Conclusions	Public acquisition would assure protection of this reach of Clover Creek, wetlands and wooded areas on the site.
Acquisition cost	\$3,009,410.00

Project Name	Findings and Conclusions
Kobayashi Preserve	
Sponsor	City of University Place
Title to be held by	City of University Place
Parcel size	Approximately 5.53 acres
Parcel number	02-20-27-1-072 & 069
Property location	6420 Chambers Creek Road West
Current use	Residence
Open space attributes	Fish and Wildlife, Streams, Wetlands, Wooded areas, Aquifer Recharge area, Flood Hazard area, and Landslide area.
Other attributes	The property is within the City's UGA and 5 acres or greater in area.
Conclusions	Public acquisition would assure protection of Chambers and Leach Creeks, associated wetlands and wildlife corridor as well as protect the woodland areas of the site.
Acquisition cost	Purchase is Pending.

Project Name	Findings and Conclusions
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Project Name	Findings and Conclusions
Fairfax Town Site	
Sponsor	Pierce County Parks and Recreation
Title to be held by	Pierce County Parks and Recreation
Parcel size	Approximately 193.75 acres
Parcel number	06-18-34-1-000, 06-18-35-2-009, 06-18-26-3-003 and 06-18-27-4-000
Property location	Pass Carbonado over the Fairfax Bridge, 31716 Camp 1 Road.
Current use	Commercial forest land
Open space attributes	Critical Salmon Habitat, Fish and Wildlife, Streams, Wooded areas, Agricultural Land, Aquifer Recharge area, Historic Landmark site, Flood Hazard area, Steep Slopes
Other attributes	Property is 5 acres or greater in area.
Conclusions	Public acquisition would assure protection of the historic town site of Fairfax and of an upper reach of the Carbon River.
Acquisition cost	Purchase is Pending

Pierce Conservation District and Stream Team

Water Programs continued to fund basic operations for the Pierce Conservation District and Stream Team in 2003. The PCD continued to leverage this money into additional funding via grants. They have been cooperating on the Burley Lagoon and Filucy Bay. The PCD assists the County in promoting proper agricultural practices throughout the incorporated and unincorporated areas. The PCD requested a \$5 per parcel yearly fee in the unincorporated County and several incorporated areas to enable them to do even more. This proposal passed in November 2003, with the first collections occurring at the end of April, 2004. The amount they expect to raise in unincorporated Pierce County is about \$576,476 per year. This will translate to additional projects for farms and fish in the County, and we will report on their projects in 2004.

Stream Team continues to act as an important educational tool for the County. It now numbers over 300 volunteers doing plantings, staffing educational displays at community fairs, doing testing on streams, and other activities. A large part of the value of Stream Team is having all those eyes out in the community, and reporting back to us if they see anything unusual happening at their neighborhood waterbody.

A copy of the abbreviated annual report for the PCD and Stream Team is attached.



Natural Resource Improvements in 2003 – Summary

- 20+ Wildlife Habitat enhancement projects completed as partners or sponsors
- Achieved assessment funding (89.08.400 RCW)
- Authored WRIA 12 Salmon Habitat Limiting Factors Analysis
- Planned and engineered four Salmon Recovery Projects, to be Constructed in 2004



Mission of the Pierce Conservation District

- *The Pierce Conservation District is a legal sub-entity of State Government mandated by RCW 89.08 to develop and administer voluntary, non-regulatory programs. The District promotes “on the ground” conservation and long-term sustainability of natural resources through action oriented leadership, partnership, stewardship, and education with the citizens, organizations and governments which have a stake in Pierce County for future generations.*

Water Quality Implementation

- *Assisted in creation of local Agricultural Conservation Easement Program.*
- *Worked with 14 cooperators to install 13 Best Management Practices (BMP), protecting and enhancing over five acres of riparian wildlife habitat.*

Basic Funding

- *The Pierce Conservation District used basic funding in 2003 to print outreach materials for Farm Planning workshops, furthering our program of voluntary land management practices throughout Pierce County*

Local Funding

- *Obtained RCW 89.08.400 Conservation Assessment through Pierce County Council.*
- *Provided assistance to various citizen groups through Pierce County Stream Team to plan and implement dozens of watershed protection activities.*

Puget Sound/Water Quality

- *Catalogued fish passage barriers in Nisqually River Basin and Key Peninsula/Gig Harbor Watersheds.*
- *Assisted in Construction of Puget Creek Restoration project, opening 1.2 stream miles for chum and coho salmon.*
- *Prepared for 2004 construction of four salmon recovery projects, including Foothills Trail Restoration Project, White River Road Decommissioning Project, Sumner Sportsmen’s Club Oxbow Restoration Project, and West Milton/Hylebos Oxbow Reconnection Project .*

Professional Engineering

- *Engineering work was done on the Mashel River Restoration and the Ohop Creek Restoration projects, major salmon recovery work in cooperation with the Nisqually Indian*

Tribe with this funding in 2003. Both projects have been rated top priority for restoration of endangered Nisqually River Chinook salmon.

Conservation Reserve Enhancement Program (CREP)

- *Implemented two CREP plantings in Gig Harbor and Nisqually Watersheds.*
- *Reforested three acres of riparian habitat..*

Dairy

- *Brought six Pierce County dairies into compliance with Dairy Nutrient Management Act.*
- *Approved four dairy plans.*
- *Assisted NRCS in construction of one dairy lagoon system.*

Watershed Conservation/Habitat Restoration

- *Authored the Chambers/Clover Creek (WRIA 12) Salmon Habitat Limiting Factors Analysis*

Community Collaboration & Coordination

- *Worked with Puyallup River Watershed Council, Nisqually River Council, Chambers/Clover Creek Watershed Council, and Key Peninsula/Gig Harbor Watershed Council to prioritize and plan habitat restoration and protection projects and programs*

Information & Education

- *Continued Pierce County Stream Team, offering volunteer coordination of projects involving 300+ local volunteers.*
- *Assisted in formation of two local watershed protection groups.*

Washington State University Watershed Stewards Program

This course, designed to educate citizens on water quality issues and solutions to problems, was offered again in 2003.

Financial Summary

A summary of all the financial items mentioned in this report are summarized in the table following:



2003 NPDES EXPENDITURES

DEPT/PROGRAM	SWMP COMMITMENT		ACTUAL EXPENDITURE	
	FTE	\$	FTE	\$
Water Programs				
Capital Improvement Program	7.3	671,000	13	5,015,829
Salmon Habitat Recovery Lead Entity	-	-	1.0	100,000
Pond & Creek Maintenance & Smallworks	-	-	7	840,564
District Court Crew	-	-	7.8 FTE equival.	93,750
NPDES Coordination & Transfer to PALS	.5	48,000	2.5	452,041
Monitoring	1.1	79,850	1.4	100,712
Watershed Planning & Basin Plans	2.5	247,000	2.8	811,722
CWSP	1.25	125,000	1.25	79,008
Industrial Inspection	1.7	123,300	1.2	59,346
Maintenance Contract Insp.	-	-	.5	49,653
River Improvement Activities				
Buyouts & Acquisitions	-	-	Varies	2,080,000
Drainage Investigations	1.6	119,850	1	*56,430
Endangered Species Act			2+	642,670
Tacoma Pierce County Health Department				
Recreational Shellfish	.1	7,800	.15	12,400
On-Site Sewage O&M	2	153,400	4.25	670,000
Bathing Beach Sampling	-	-	.1	8,000
Marine Beach Monitoring	-	-	.1	12,000
Groundwater Monitoring	-	-	1.5	106,000
Compliance Group	2	153,400	4.5	336,000
Chambers-Clover Management Plan	-	-	.2	55,340
Shellfish/Source protection and Septic repair	-	-	1.9	169,500
Hazardous Waste Mgmt	-	-	1.8	166,000
PALS				
Implementation of Stormwater Management Manual	17	1,289,000	**19.6	1,623,000
Code Enforcement	4	465,700	.2	***10,900

DEPT/PROGRAM	SWMP COMMITMENT		ACTUAL EXPENDITURE	
	FTE	\$	FTE	\$
Transportation Services				
Road Design	2	154,000	2	163,000
Road Maintenance	23.75	1,994,300	9	***1,181,170
Pierce County Conservation District and Stream Team				
	-	-	Varies	139,824
Parks and Recreation				
Conservation Futures	1	-	1	3,613,011
Training	-	5,305	-	20,203
Adequate Information				
Mapping	1	70,000	varies, but >1	260,500 River-FEMA 1.5 million
Education				
	1	60,000	4	1,569,000

*Does not include PALS or Roads figures, which are wrapped into their budgets.

**FTE does not include people hired by contract from 5 engineering firms.

***Difference in amounts as a result of better accounting allowing designation of NPDES functions only.

Appendix 1

Inspections Report

2003 Site
Inspections
Pierce County
Water Programs

Parcel Number	Sic Code	Site Address	Inspection Date	Reason Code	Inspection Type
0318101006	4225	21323 MOUNTAIN HWY	7/16/2003	SYS	Site
0420205010	9512	5104 & 5112 85TH AVE E.	6/18/2003	SYS	Site
0319131137	5541	5318 128TH ST. E.	1/4/2001	COM	Reinsp
0122305028	5541	13706 SR 302 KPN	12/18/2000	COM	Reinsp
0520087076	9999	17008 FOREST CANYON RD. E.	1/4/2001	COM	Reinsp
0418033015	4225	20619 MERIDIAN AVE E	1/4/2001	COM	Reinsp
0319212027	7538	15119 PACIFIC AVENUE	1/4/2001	COM	Reinsp
5025001970	8661	16521 PACIFIC AVE	1/4/2001	COM	Reinsp
7745002400	7549	9815 GOLDEN GIVEN RD E	1/4/2001	COM	Reinsp
7750000423	8641	10915 PORTLAND AVE E	1/4/2001	COM	Reinsp
0319044116	4225	10731 "A" ST. S.	1/16/2001	COM	Reinsp
0219053059	5541	10649 108TH AVE SW	1/10/2001	COM	Reinsp
0319044095	3272	11007 "A" ST. S.	2/21/2001	SYS	Reinsp
0219053059	5541	10649 108TH AVE SW	2/28/2001	COM	Reinsp
0421314009	5963	8209 PACIFIC HWY E	4/23/2001	COM	Reinsp
0319068019	7533	2201 12TH ST. S.	5/7/2001	COM	Reinsp
0319257020	4231	4003 176TH ST. E.	5/11/2001	REQ	Reinsp
0519012037	9999	9910 233RD AVE E	5/22/2001	SYS	Reinsp
0619057002	9999	26306 HWY 410 EAST	12/28/2001	SYS	Reinsp
0619057002	9999	26306 HWY 410 EAST	1/17/2002	COM	Reinsp
0519012037	9999	9910 233RD AVE E	5/25/2001	COM	Reinsp
0221282015	5541	2905 JAHN AVE NW STE 7	6/1/2001	SYS	Reinsp
0319257020	4231	4003 176TH ST. E.	6/11/2001	COM	Reinsp
0421314009	5963	8209 PACIFIC HWY E	6/12/2001	COM	Reinsp
0319257020	4231	4003 176TH ST. E.	6/12/2001	COM	Reinsp
0419325004	4311	17711 85TH AVE E.	6/13/2001	COM	Reinsp
0420012014	6515	1400 140TH AVE NE	6/14/2001	COM	Reinsp
0319068021	4911	2200 109th ST S	6/22/2001	COM	Reinsp

0519012037	9999	9910 233RD AVE E	6/13/2001	COM	Reinsp
0519358033	9999	18414 227TH AVE E.	7/11/2001	SYS	Reinsp
0418165001	4226	10102 224 TH ST. E.	9/4/2001	SYS	Reinsp
0417018007	2599	14814 KAPOWSIN HWY	8/6/2001	SYS	Reinsp
6762002262	5541	320 S. GARFIELD	9/4/2001	COM	Reinsp
0518042008	9512	19220 S R 162 EAST	9/11/2001	COM	Reinsp
0416242031	4225	OFF EATONVILLE CUT OFF RD.	12/11/2001	SYS	Reinsp
0420316009	4225	8401 CANYON ROAD/TEXACO	2/21/2002	COM	Reinsp
0320274090	5561	7201 PORTLAND AVE	2/28/2002	COM	Reinsp
0319064027	4225	11109 S. STEELE	5/23/2002	SYS	Reinsp
0318033046	4225	20617 MOUTAIN HIGHWAY	6/19/2002	SYS	Reinsp
6021910090	8641	17506 MERIDIAN ST E.	7/9/2002	COM	Reinsp
0319131137	5541	5318 128TH ST. E.	6/28/2002	COM	Reinsp
0419285010	4225	16104 MERIDIAN E.	7/1/2002	COM	Reinsp
0418152015	9999	10216 224TH ST E.	7/11/2002	COM	Reinsp
4075010356	8641	10504 CANYON RD.	7/1/2002	COM	Reinsp
5001340010	5561	22321 MTN HWY	6/26/2002	COM	Reinsp
0319212027	7538	15119 PACIFIC AVENUE	6/26/2002	COM	Reinsp
5001470010	8641	99th Ave Ct E & "A" ST	1/3/2003	SYS	Reinsp
5000830230	5541	2nd Ave Ct E & 99th St E	1/15/2003	REQ	Reinsp
0419063122	5541	5601 112th St E	1/13/2003	SYS	Site
0317241049	4225	33916 MTN HWY E	2/6/2003	SYS	Site
0217281104	5541	35618 SR 507	2/7/2003	SYS	Site
0520292047	4581	6601 166TH AVE E	2/14/2003	COM	Site
5875000225	4225	587 6TH AVE	2/14/2003	SYS	Site
0217281102	5541	35201 MCKENNA TANAWAX HWY	2/6/2003	SYS	Site
0217251024	5541	35216 40TH AVE S. (SR 702)	2/6/2003	COM	Site
0415102001	9999	50025 MOUNTAIN HWY E.	2/4/2003	SYS	Site
0318253043	7538	26620 MTN HWY E.	2/5/2003	SYS	Site
0318045020	4225	19825 MOUNTAIN HIGHWAY E.	2/18/2003	SYS	Site
5001340010	5561	22321 MTN HWY	2/18/2003	SYS	Site
5001550020	3292	20122 MTN HWY	2/18/2003	SYS	Site
0418036010	3541	19921 MERIDIAN E.	2/20/2003	SYS	Site
0320254019	7519	7206 CANYON RD E	2/20/2003	SYS	Site
0420316009	4225	8401 CANYON ROAD/TEXACO	2/20/2003	SYS	Site

6021430140	8641	5630 163RD STREET EAST	8/21/2003	SYS	Site
0418081014	9999	8220 EUSTIS HUNT RD.	11/25/2002	COM	Reinsp
0320361077	3441	8320 CANYON RD E.	2/20/2003	SYS	Site
0318105020	5541	21303 MTN HWY E	1/9/2003	BR	Site
5001510020	8211	5306 154th Ave Ct. E.	2/3/2003	BR	Site
0418152015	9999	10216 224TH ST E.	3/20/2003	SYS	Site
0420364049	1499	9508 SR 162	2/20/2003	SYS	Site
040417037005	2511	30323 MERIDIAN AVE E.	2/20/2003	SYS	Site
0318113015	5541	22208 MOUNTAIN HWY	2/18/2003	SYS	Site
0122226044	5541	9522 KPN/SR 302	3/4/2003	SYS	Site
0418188051	4226	23518 70TH AVE E	3/5/2003	SYS	Site
4585000621	9999	1315 KEY PENINSULA HWY	3/4/2003	SYS	Site
0122305028	5541	13706 SR 302 KPN	3/4/2003	SYS	Site
0520046014	4311	18215 9TH ST. E.	3/5/2003	SYS	Site
0615276006	5521	29716 SR 706 EAST	3/6/2003	SYS	Site
0919044008	1442	58120 SR 410	3/6/2003	SYS	Site
0419307001	1711	17519 CANYON RD E	3/11/2003	SYS	Site
4660000721	9999	18920 PACIFIC AVE S	3/11/2003	SYS	Site
2695002750	8049	13221 PACIFIC AVE S.	3/11/2003	SYS	Site
5025003230	5541	16618 PACIFIC AVE S.	3/11/2003	SYS	Site
5025001970	8661	16521 PACIFIC AVE	3/12/2003	SYS	Site
0520087076	9999	17008 FOREST CANYON RD. E.	2/14/2003	SYS	Site
7745003542	8641	10323 PORTLAND AVE E	3/12/2003	SYS	Site
5025001341	7532	17519 PACIFIC AVE S.	3/12/2003	SYS	Site
9560400060	8641	10505 STEELE ST. S.	3/17/2003	SYS	Site
0320273138	5599	7201 GOLDEN GIVEN	3/17/2003	SYS	Site
7745002400	7549	9815 GOLDEN GIVEN RD E	3/17/2003		Site
0219053059	5541	10649 108TH AVE SW	3/18/2003	SYS	Site
0022261047	5541	16914 SR 302 KPN	3/18/2003	SYS	Site
0319064027	4225	11109 S. STEELE	3/17/2003	SYS	Site
0318041027	4225	19614 MTN HWY E.	2/17/2003	SYS	Site
0419304022	7538	6805 176TH ST. E.	3/12/2003	SYS	Site
0320274090	5561	7201 PORTLAND AVE	3/27/2003	SYS	Site
5025003893	9999	17408 PACIFIC AVENUE S.	3/27/2003	SYS	Site
5001740020	6514	11320 CANYON RD	3/27/2003	SYS	Site

2240003807	9999	11908 PACIFIC AVE	3/27/2003	SYS	Site
6021910090	8641	17506 MERIDIAN ST E.	3/26/2003	SYS	Site
5025002530	9224	15905 PACIFIC AVE	3/26/2003	SYS	Site
5001260171	4225	20315 MOUNTAIN HWY E.	3/26/2003	SYS	Site
0319212027	7538	15119 PACIFIC AVENUE	3/26/2003	SYS	Site
0319043004	4225	10421 PACIFIC AVE S.	3/25/2003	SYS	Site
4745000760	9999	10610 PACIFIC AVE	3/25/2003	SYS	Site
0319333024	4225	19121 PACIFIC AVE S	3/25/2003	SYS	Site
2695002041	5541	13204 PACIFIC AVE E	3/27/2003	SYS	Site
5815000030	1442	3004 112TH ST E.	4/7/2003	SYS	Site
5805000321	8211	10404 PORTLAND AVE E.	4/16/2003	SYS	Site
0419306040	3069	16105 CANYON RD E	4/16/2003	SYS	Site
4320000221	9999	11608 MERIDIAN E.	4/21/2003	SYS	Site
0419118028	4226	12714 122ND ST. E.	4/22/2003	SYS	Site
4320000956	9999	11802 MERIDIAN EAST	4/22/2003	SYS	Site
0419285010	4225	16104 MERIDIAN E.	4/22/2003	SYS	Site
4075210723	9999	11215 CANYON RD	4/29/2003	SYS	Site
0319092801	5013	11202 PACIFIC AVE S.	4/29/2003	SYS	Site
4075010356	8641	10504 CANYON RD.	4/29/2003	SYS	Site
0319131137	5541	5318 128TH ST. E.	4/29/2003	SYS	Site
7750000423	8641	10915 PORTLAND AVE E	4/28/2003	SYS	Site
0121023015	5541	8111 86th AVE. NW	4/30/2003	SYS	Site
0122242060	5541	14317 PURDY DR. NW.	4/30/2003	SYS	Site
0419288007	2892	16826 MERIDIAN E.	5/5/2003	SYS	Site
0420271088	9999	6601 114TH AVE CT. E.	5/5/2003	SYS	Site
0419107047	4226	12413 Meridian Avenue E.	5/6/2003	SYS	Site
0419181044	7538	12820 WOODLAND AVE E.	5/5/2003	SYS	Site
0319134082	5531	13602 CANYON RD E	5/6/2003	SYS	Site
0319075004	7538	2042 112TH ST. SOUTH	5/6/2003	SYS	Site
0419063049	7534	10915 CANYON ROAD EAST	5/6/2003	SYS	Site
0319091002	5093	220 TH E. 112TH ST.	5/6/2003	SYS	Site
0420062212	9999	219 & 301 54TH AVE E	3/7/2003	REQ	Site
0319101005	5541	1510 112TH ST E	5/6/2003	SYS	Site
0319053128	2431	1525 S. 108TH ST.	5/8/2003	SYS	Site
4075010748	8641	10918 CANYON RD	5/7/2003	SYS	Site

4320000912	9999	11722 MERIDIAN ST E	5/7/2003	SYS	Site
6021430120	5541	5711 161ST ST CT E.	5/13/2003	SYS	Site
0419306045	4226	5711 160TH ST E.	5/13/2003	SYS	Site
0419306044	7513	5711 160TH ST. E.	5/13/2003	SYS	Site
4075212006	9999	5517 119TH ST. CT. E.	5/13/2003	SYS	Site
0319044095	4225	11007 A ST. S.	5/15/2003	SYS	Site
0319068021	4911	2200 109th ST S	5/15/2003	SYS	Site
7810000641	8641	818 99TH ST E	5/14/2003	SYS	Site
0221297022	5521	1914 POINT FOSDICK DR NW	5/14/2003	SYS	Site
2093001670	8641	11017 PORTLAND AVE E	5/15/2003	SYS	Site
0320361093	5012	8516 CANYON RD	5/16/2003	SYS	Site
0419306034	4226	6034 & 6033 56TH AVE CT E	5/20/2003	SYS	Site
0420233188	9512	11809 VALLEY AVE E	5/27/2003	SYS	Site
0419285018	7538	10004 162ND ST CT E.	5/27/2003	SYS	Site
0318033019	4225	20710 MT HIGHWAY	5/28/2003	SYS	Site
0419218016	7521	15930 99TH ST CT E.	5/28/2003	SYS	Site
0319044097	4225	10801 " A" ST. S. BLDG O	5/28/2003	SYS	Site
0220261009	5541	5153 66TH ST W.	5/22/2003	SYS	Site
0318041103	5812	317 FIELD RD DALLAS	5/22/2003	SYS	Site
0319034005	1761	10611 18TH AVE E.	5/22/2003	SYS	Site
0319071079	5093	11721 STEELE ST. S.	5/1/2003	SYS	Site
0319071079	5093	11721 STEELE ST. S.	5/22/2003	SYS	Site
6165500110	6512	304 FIELD RD.E.	5/22/2003	SYS	Site
0319033008	3441	10709 12TH AVE E.	5/22/2003	SYS	Site
0421314122	1742	8025 PACIFIC HWY E.	5/20/2003	SYS	Site
7745003030	8641	10215 PORTLAND AVE	5/15/2003	SYS	Site
7895000210	8641	14053 PIONEER WAY E.	5/8/2003	SYS	Site
0520216009	9999	5222 W. TAPPS DR. E.	6/12/2003	SYS	Site
0419018002	4225	11108 SR 162 E.	6/12/2003	SYS	Site
0319071049	5541	11507 STEELE ST. S.	6/5/2003	SYS	Site
0319071078	5541	2205 116TH ST S.	6/5/2003	SYS	Site
0615251000	5511	55016 KERNAHAN RD. E.	6/5/2003	SYS	Site
0318044093	4226	20612 3RD AVE E	6/9/2003	SYS	Site
0318044095	4226	20620 8TH AVE E	6/9/2003	SYS	Site
9727000010	1542	12810 109TH AVE CT E	6/9/2003	SYS	Site

0520103009	9999	3102 204TH AVE	6/12/2003	SYS	Site
0420202080	4311	7702 RIVER ROAD	6/10/2003	SYS	Site
0519022061	9999	21916 HWY 410	6/12/2003	SYS	Site
0519026036	9999	21916 HWY 410 EAST	6/12/2003	SYS	Site
0519021012	9999	22212 HWY 410	6/12/2003	COM	Site
0520303041	7538	7406 RIVERSIDE DR E.	6/10/2003	SYS	Site
0519345056	9999	17913 PIONEER WAY E. (SR 162)	6/10/2003	SYS	Site
3137000023	7538	2023 125TH ST E.	6/10/2003	SYS	Site
0319071073	7538	11707 21ST AVE S. #A	5/16/2003	SYS	Site
0122361066	5541	5803 SEHMEI DR NW	6/13/2003	SYS	Site
0221293091	2599	2005 34TH AVE NW	6/6/2003	SYS	Site
7580000080	8641	6103 REID DR NW	6/16/2003	SYS	Site
0221293027	5541	2105 34TH AVE NW	6/16/2003	SYS	Site
0221293049	5541	1903 PT FOSDICK DR NW	6/16/2003	SYS	Site
0619057002	9999	26306 HWY 410 EAST	6/12/2003	SYS	Site
6023790410	8641	15321 66TH AVE E	6/18/2003	BR	Site
0320365004	7538	5309 84th St. E., Tacoma, WA 98446	6/18/2003	SYS	Site
2695001820	9999	13502 PACIFIC AVE S.	6/25/2003	SYS	Site
0420071128	4581	1623 65TH AVE E	6/24/2003	SYS	Site
0221062057	5541	9511 54TH AVE NW	6/24/2003	SYS	Site
5000830230	5541	99th St. E and 2nd Ave	6/25/2003	REQ	Site
0022144039	5541	17008 150TH AVE KPN & WRIGHT BLISS	6/24/2003	SYS	Site
5002860010	2421	18217 38TH AVE E.	6/28/2003	BR	Site
5025001690	6515	112 168th Street South	7/2/2003	BR	Site
0421314122	1742	8025 PACIFIC HWY E.	7/1/2003	REQ	Reinsp
0319044098	9999	10721-B "A" ST. S.	7/8/2003	REQ	Site
3645000093	7999	15202 "A " STREET (MILITARY RD)	7/15/2003	SYS	Site
0419272031	2411	16719 MERIDIAN # 9	7/15/2003	SYS	Site
0419272008	5075	16515 MERIDIAN EAST	7/17/2003	SYS	Site
0419312059	7538	5521 184TH ST. E.	7/21/2003	SYS	Site
6021430140	8641	5630 163RD STREET EAST	7/21/2003	SYS	Site

2130000043	5063	726 6th Ave	7/22/2003	SYS	Site
0420228037	4225	6326 114TH AVE CT. E.	7/23/2003	SYS	Site
5002590010	8641	5301 184TH ST E	7/23/2003	SYS	Site
0417303022	4013	36417 MOUNTAIN HWY	7/23/2003	SYS	Site
0319068020	2452	2211 112TH ST S.	7/24/2003	SYS	Site
5780000260	1791	757 138TH ST. S.	7/24/2003	SYS	Site
7745003481	8641	1718 103RD ST. E.	7/24/2003	SYS	Site
7560015421	5541	6805 112TH ST E	7/29/2003	SYS	Site
5002950010	2435	S. 96TH ST & AINSWORTH AVE S.	7/24/2003	SYS	Site
6021430080	5013	16214 157TH AVE E	8/5/2003	SYS	Site
0319044002	3465	616 105TH ST CT. E.	8/21/2003	SYS	Site
5002860010	2421	18217 38TH AVE E.	8/21/2003	SYS	Site
6023530010	7539	11502 138TH ST CT E	8/19/2003	SYS	Site
0319281024	7549	16115 "B" ST E	8/20/2003	SYS	Site
9830000043	2436	124 S. 146TH ST.	8/20/2003	SYS	Site
0319368005	4225	18425 50TH AVE E	8/2/2003	SYS	Site
0319257020	7538	4111 176TH ST E	8/26/2003	SYS	Site
0319331066	5541	18020 EAST "B" STREET	8/20/2003	SYS	Site
0319213011	5531	15225 PACIFIC AVE	8/26/2003	SYS	Site
0319281056	8641	16601 4th Ave Ct. E.	8/28/2003	SYS	Site
0420061046	8641	522 70th Ave E	9/18/2003	SYS	Site
0418025049	4225	133rd Ave & 200th St. E.	9/8/2003	SYS	Site
6021910070	5541	17514 Meridian E. (Fred Meyer)	9/23/2003	REQ	Site
5001260171	4225	20315 MOUNTAIN HWY E.	9/30/2003	REQ	Site
6023840010	4226	12203 62ND AVE E, Waldons Pond	10/6/2003	BR	Site
5002900010	5599	1007 E. 96TH ST.	10/6/2003	BR	Site
5002950010	2435	S. 96TH ST & AINSWORTH AVE S.	10/6/2003	BR	Site
0316063020	4225	39901 HARTS LAKE VALLEY RD	9/17/2003	SYS	Site
6023700010	7513	9401 149TH ST. E.	9/15/2003	SYS	Site
6023690010	4225	1512 80TH AVE E.	9/15/2003	SYS	Site
0420202026	9512	7728 RIVER RD.	10/16/2003	COM	Site
0419313041	1521	5415 189TH ST E	9/11/2003	SYS	Site

4320001944	9999	Nelson SP, 9904 122nd St. E.	9/8/2003	SYS	Site
6023420010	2599	8527 136TH ST. CT. E.	10/15/2003	SYS	Site
6023680010	4226	12721 117TH AVE CT E	10/20/2003	SYS	Site
0319364038	8641	4615 192nd St E	8/7/2003	BR	Site
0420071128	4581	1623 65TH AVE E	10/29/2003	COM	Reinsp
0419181050	3713	6920 128TH AVE E.	10/29/2003	COM	Reinsp
0122226044	5541	9522 KPN/SR 302	10/29/2003	COM	Reinsp
0219053059	5541	10649 108TH AVE SW	10/31/2003	COM	Reinsp
0419018002	4225	11108 SR 162 E.	11/3/2003	COM	Reinsp
0122361066	5541	5803 SEHMEL DR NW	8/5/2003	COM	Reinsp
0615251000	5511	55016 KERNAHAN RD. E.	8/14/2003	COM	Reinsp
2093001670	8641	11017 PORTLAND AVE E	11/19/2003	COM	Reinsp
5000830230	5541	99th St. E and 2nd Ave	11/19/2003	REQ	Site

Total Inspections

244

Appendix 2

Monitoring Sites

WORK PLAN

Clover creek (Monthly download)

Spanaway Creek - 5 hours, site download, water quality testing and maintenance.
Clover at 25th - 5 hours, site download, water quality testing and maintenance.
Clover at C - 5 hours, site download, water quality testing and maintenance.
Clover at 138th - 5 hours, site download, water quality testing and maintenance.
Clover at Brookdale - 5 hours, site download, water quality testing and maintenance.

Muck creek (Monthly)

Muck Creek at Roy - 5 hours, site download, water quality testing and maintenance.
Muck creek at Fort Lewis - 5 hours, site download, water quality testing and maintenance.

Mid Puyallup (Monthly)

Fennel Creek at Buckley - 5 hours, site download, water quality testing and maintenance.
Fennel at McCutcheon - 5 hours, site download, water quality testing and maintenance.
Horsehaven Creek - 5 hours, site download, water quality testing and maintenance.
Canyon Falls Creek - 5 hours, site download, water quality testing and maintenance.

Lower Puyallup (Monthly)

Canyon Creek - 5 hours, site download, water quality testing and maintenance.
Swan Creek - 5 hours, site download, water quality testing and maintenance.
Clear Creek - 5 hours, site download, water quality testing and maintenance.

Gig Harbor (Monthly)

Artondale Creek - 5 hours, site download, water quality testing and maintenance.
Crescent Creek - 5 hours, site download, water quality testing and maintenance.
McCormick creek - 5 hours, site download, water quality testing and maintenance.

Rain gauges (Monthly)

Puyallup - 3 hour, site download and maintenance.
South Prairie - 3 hour, site download and maintenance.
Home Fire Station - 3 hour, site download and maintenance.
Purdy Shop - 3 hour, site download and maintenance.
Elk Plain Shop - 3 hour, site download and maintenance.
Roy Fire Station - 3 hour, site download and maintenance.

Pond equipment maintenance:

144th - 4 hour site download and maintenance.
196th - 4 hour site download and maintenance.
W-1 crest gauges - 2 hour read and maintain.
Brookdale Pond - 4 hour site download and maintenance
144th site a - 4 hour site download and maintenance.
144th site b - 4 hour site download and maintenance.

Sampling

South Prairie sampling –(Monthly) - 10 hours – sample, water quality data and lab visit.

Lake Sylvia sampling (Quarterly) - 10 hours – sample, water quality data and lab visit.

Monitoring Wells

Ates Pond	5
W-1	5
138 th and A Street	2
204 th and 92 nd	2
224 th and 78 th	1
204 th and 67 th	1
Randels	2
201 and 67 th	1
Port of Tacoma	2
144 th St Pond	1
112 th st E. (Kip)	2

Appendix 3

Outfall Inspections for Illicit Discharges

